

Annual Report Board of Health

CITY OF NEWARK
NEW JERSEY

*Newark
— Dept of Health
— Annual Report*



Two hundred and fiftieth
Anniversary
1666-1916

1666

1916



ROBERT TREAT directing landing
of founders of NEWARK

250 Anniversary

NEWARK NEW JERSEY



Newark Board of Health Building and City Dispensary, William and Plane Streets

WITH THE COMPLIMENTS OF THE
BOARD OF HEALTH
OF NEWARK, N. J.

*THIS DEPARTMENT WOULD BE GLAD TO RECEIVE YOUR
PUBLICATIONS IN RETURN*

*CHARLES V. CRASTER, M.D., D.P.H.
HEALTH OFFICER*

ANNUAL REPORT
OF THE
Board of Health

CITY OF NEWARK, N. J.



A description of the activities along the lines of Public Sanitation, Disease Prevention, Pure Food and Milk, as well as other efforts to improve the living and health conditions of the community.

FOR THE YEAR ENDING DECEMBER 31, 1915

THE ESSEX PRESS PRINTERS
NEWARK, N. J.



"A murderous array of diseases has to be fought against and the battle is not a battle for the sluggard."—*John Wesley*.

TO THE READER—It is hoped that the form of this report will be found to tell a story of interest and value to all who have the health of the community at heart. It is the record of activities of 140 employees of the different Divisions and Bureaus of the Board of Health, who have worked throughout the year to safeguard the health of the three hundred and seventy-five thousand citizens of this city.

CHARLES V. CRASTER, M. D., D. P. H.,

Health Officer.

Newark, N. J., February, 1916.

MEMBERS OF THE BOARD OF HEALTH
OF NEWARK, NEW JERSEY
FOR THE YEAR 1915

WM. S DISBROW, M.D., <i>President</i>	151 Orchard Street
THOMAS J CALLAN	574 Broad Street
FRED S CRUM	751 Clifton Avenue
EDW. E GNICHTEL	87 Magnolia Street
LITTLETON KIRKPATRICK	424 Ridge Street
D. L. McCORMICK, M.D	9 Tichenor Street
MORRIS RACHLIN	76 Shanley Avenue
THEO TEIMER, M.D	184 Clinton Avenue
C F WEBNER, M.D	96 Clinton Avenue
ELMER G WHERRY, M.D	325 Clinton Avenue

HEALTH OFFICER

(Acting) CHAS. V CRASTER, M.D., D.P.H. . . 51 Cypress Street

DAVID D CHANDLER (retired June 1st, 1915)

STANDING COMMITTEES OF THE
BOARD OF HEALTH
FOR THE YEAR 1915

SANITATION

DR. McCORMICK

DR. WEBNER

MR. CRUM

DR. THIMER

MR. CALLAN

FINANCE

MR. GNICHTEL

MR. KIRKPATRICK

MR. RACHLIN

LAWS AND ORDINANCES

MR. CRUM

MR. CALLAN

MR. KIRKPATRICK

RULES

MR. KIRKPATRICK

MR. CALLAN

MR. CRUM

APPOINTMENTS

MR. CALLAN

MR. CRUM

DR. W. JERRY

SUPPLIES

MR. RACHLIN

MR. KIRKPATRICK

MR. CALLAN

BOARD OF HEALTH.

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CITY HOSPITAL

MR. GNICHTEL	DR. TEIMER
DR. WEBNER	MR. CALLAN
DR. WHERRY	DR. WHERRY

TRAINING SCHOOL

DR. WEBNER	DR. MCGOWAN
DR. WHERRY	DR. TEIMER
DR. WHERRY	DR. DISBROW

TU BERCULOSIS SANATORIUM

DR. TEIMER	MR. CALLAN
MR. RACKLIN	DR. WEBNER
MR. RACKLIN	DR. MCGOWAN

FOOD AND DRUGS

MR. RACKLIN	MR. KIRKPATRICK
MR. CALLAN	MR. CALLAN

PURCHASING

MR. RACKLIN	MR. KIRKPATRICK
MR. CALLAN	MR. CALLAN

SEX HYGIENE AND SOCIAL ETHICS

MR. CALLAN	MR. KIRKPATRICK
MR. RACKLIN	MR. RACKLIN

LEGISLATIVE

MR. GNICHTEL	DR. MCGOWAN
DR. TEIMER	DR. WEBNER
MR. CRUM	MR. KIRKPATRICK

CHILD HYGIENE

DR. WHERRY	DR. MCGOWAN
MR. CRUM	DR. TEIMER
MR. CRUM	DR. WEBNER

MEETINGS

BOARD OF HEALTH

Meetings held in the Board of Health Offices, William and Plane Streets, Newark, N. J.

The regular meeting of the Board is held on the First Tuesday of each month at 8 30 P. M. for the transaction of all business

The regular meetings of the "Sanitary Committee are held on the Thursday preceding the First Tuesday of each month at 8 30 P. M.

NOTICE

The printing and publication of this Report is paid for out of the funds of the City, and for the information of taxpayers Copies may be had without charge on application to the Board of Health, Plane and William Streets, Newark, N. J.

EMPLOYEES OF THE BOARD OF HEALTH

OFFICE DIVISION

JOHN J GREEN.....	<i>Clerk, Bureau Contagious Diseases</i> 308 Riverside Avenue
W. J. BUEHLER	<i>Bookkeeper</i> 7 Ninth Avenue
WILLIAM H. YOUNG.....	<i>Clerk, Sanitary Division</i> 602 Mt Prospect Avenue
ELBERT S. BALL.....	<i>Clerk, Sanitary Division</i> 226 South Tenth Street
ROBERT F. MORGAN, Jr.	<i>Stenographer and Clerk</i> 150 Milford Avenue.
JOHN J. ROGERS	<i>Stenographer, Food and Drug Division</i> 109 South Eighth Street
MISS JENNIE McNALLY.....	<i>Telephone Operator</i> 135 Renner Avenue
MISS CORA B. NATHAN.....	<i>Clerk</i> 375 Walnut Street
EDWARD E. WORR, M. D.	<i>Superintendent, Bureau Contagious Diseases</i> 271 High Street.
HERBERT B. BALDWIN.....	<i>Chemist</i> 927 Broad Street
WILLIAM WIENER	<i>Meteorologist</i> 62½ Nelson Place

BOARD OF HEALTH.

CITY DISPENSARY

WILLIAM A. SMITH . . . . .	.....	Apothecary
	40 Nelson Place.	
HENRY A. OLTMAN . . . . .	.....	Assistant Apothecary
	16 Montrose Street	
ARTHUR F. WARREN . . . . .	.....	Assistant Apothecary
	16 Montrose Street	
LEO J. McMANUS . . . . .	.....	Dentist
	210 Mulberry Street	
ANNA BRIDGETT . . . . .	.....	Nurse
	34 South Seventh Street	
MORRIS SEIDL . . . . .	.....	Detailed
	18 South Eighth Street	

DISTRICT PHYSICIANS

DR CHAS. F. HILL . . . . .	.....	180 Polk Street
DR SAMUEL HIRSHBERG . . . . .	.....	140 Clinton Avenue
J. W. I. L. K. . . . .	.....	134 Mulberry Street
DR MEVER JEDEL . . . . .	.....	12 Clinton Street
DR MARY BROADWAX . . . . .	.....	79 Clinton Avenue
DR WM. FISCHER . . . . .	.....	169 South Seventh Street

SANITARY DIVISION MEAT INSPECTORS

WERNER RINGER, Veterinarian . . . . .	.....	30 Union Street
DANIEL KUHN . . . . .	.....	82 South Seventeenth Street

PLUMBING INSPECTORS

JOHN B. SULLIVAN, Chief . . . . .	.....	44 Stuyvesant Avenue
JOHN L. WHEALAN . . . . .	.....	120 Lincoln Avenue
EDWARD P. COULST . . . . .	.....	135 Walnut Street
CHAS. A. HALL & CO . . . . .	.....	140 Walnut Street
ANDREW J. McGOWAN . . . . .	.....	138 Locust Street
JACOB KULI . . . . .	.....	69 Hunterdon Street
PATRICK J. MONAGHAN . . . . .	.....	166 Avon Avenue

FOOD AND DRUG INSPECTORS

SAMUEL G SHARWELL, <i>Chief</i>	.....	102 Eleventh Avenue
*WILLIAM S WEBB.....	.....	.96 Alpine Street
*LEWIS BOUILLIER .....	.....	282 South Eleventh Street
HENRY F. KNELLER, <i>Temporary Milk Inspector</i> ,	52 Columbia Avenue	

*Sanitary Inspectors Detailed as Food and Drug Inspectors.

DETAILED INSPECTORS TO HEALTH OFFICER

ANDREW J BRADY, .	.....	.49 Seymour Avenue
CHARLES F CONRAD	.....	856 South Seventeenth Street
BERNARD J CAHILL.	160 South Tenth Street

DETAILED IN HEALTH OFFICE

HOWARD HUFFERT.....	130 South Eighth Street
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SANITARY INSPECTORS

CHARLES H BURKE	125 Union Street
HUBERT O'ROURKE	24 Leo Place
ANTONIO PANZERA.....	.....	.95 Madison Street
PATRICK J KEATING .....	.....	111 Bergen Street
GEORGE A VAN HOUTEN	.....	716 Bergen Street
WILLIAM HOPPER ..	.....	142½ Sherman Avenue
JAMES WHELAN.....	.....	193 Parker Street
HENRY McDONALD	.....	29 Vermont Avenue
CASPER BENZ ..	.....	31 Fifth Street
EDWARD J FLYNN ..	..	67 First Street
CHARLES E DEVINE..	.....	's Beverly Street
ALBERT BREIJENBACH..	.....	38 Columbia Avenue
PATRICK J BROGAN.	.....	105 Fourth Street
JOSEPH A MAGUIRE	.....	156 Norfolk Street
ADOLPH O ELSASSER	.....	746 South Nineteenth Street
GUSTAVE FRIEDMAN	.....	431 South Eleventh Street
CLARENCE J PALMER	.....	428 South Fifteenth Street
EDWARD A CLEARY	.....	122 Orchard Street

DISINFECTING CORPS

SAMUEL KNOTT, <i>Chief</i>	49 Plane Street
HIRAM R. STEWART	79 West End Avenue
CLEM. L. NELSON	..17 Rowland Street
CHARLES J. COLEMAN	189 Highland Avenue
THOMAS TELLERAN	17 Stanton Street
GEORGE W. GILMORE	169 Ridgewood Avenue
IRWIN C. DAKIN	43 Eleventh Avenue
JAMES J. WATERS	325 Walnut Street
FRED W. NICHOLS	118 Ninth Avenue

JANITORS

ADOLPH HOERNIG	62 Sixteenth Avenue
VAN S. HUBLBURST	46 Nelson Place

MEDICAL INSPECTORS OF PAROCHIAL SCHOOLS

DR. H. C. POVEY	39 Mott Street
DR. H. G. McBRIDE.....	248 Mulberry Street
DR. M. J. COFFEY... .	216 Bank Street
DR. PATRICK J. CLARK.....	393 South Orange Avenue
DR. D. R. CAMPBELL.. .	22 Central Avenue

BACTERIOLOGICAL DIVISION

DR. R. N. CONNOLLY.....	<i>Bacteriologist</i> 117 Fifth Street
DR. THOMAS RIPLEY.....	<i>Assistant Bacteriologist</i> 101 Hillside Avenue
DR. H. A. TARVELL.. .	<i>Assistant Bacteriologist</i> 87 Hillside Avenue
DR. G. WALTER LISTERMAN	<i>Assistant Bacteriologist</i> 611 Madison Avenue
DR. F. S. MARTLAND	<i>Pathologist</i> 118 Broad Street
DR. FRED. UHLIT	<i>Assistant Pathologist</i> City Hospital
KARL W. MINKER	<i>Laboratory Assistant</i> 45 Emmett Street
JOHN A. DUNN.. .	<i>Culture Collector</i> 65 South Seventh Street
WILLIAM J. FOYLE....	<i>Culture Collector</i> 142 Hudson Street

BOARD OF HEALTH.

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BUREAU OF TUBERCULOSIS

DR THOMAS N. GRAY, *Chief*. 20 Halsted Street, East Orange, N. JFIELD FORCE
CLINICAL ASSISTANTS

DR MOSES J FINE, <i>Chief</i>	145 South Orange Avenue
DR ABRAHAM ROTHSEID.....	147 Summer Avenue
DR HERMAN BUSCH.....	21 Tichenor Street
DR CARMINE G BERARDINELLI	92 Eighth Avenue

NURSES

MRS LOUISE RICHARDS WHEATON	282 Verona Avenue
MISS LAVINIA M WARD	17 Mt Prospect Avenue
MRS CORNELIA WHITEHEAD..	135 New Street
MRS GENEVIEVE K HEROLD.	76 Broad Street
MRS ELEANOR FORNACHON.	Caldwell, N. J

STENOGRAPHER

MARY F. MCGUINNESS..... 273 New Street

VERONA SANATORIUM

DR GEORGE E. HARHEN	Ter
FRANCES L. DOLAN..	Nurs.
MABEL E. D. HYATT	Nurse
HATTIE B. MOORE	Nurse
JULIA MEEHAN	Nurs
ELIZABETH LENNON.	Letter carrier
EVELYN LENNON..	Letter carrier
MARY DEVINE.	C. L
BERNARD LAWRENCE..	155 West C. ab
JENNIE MATESH.	House Helper
BERTHA CORBETT.	Mail
ANTONIO OLIMUNSKY	Waiter
LOUIS SALECK.	Waiter
VICTOR MASAKEVITCH ..	Waiter
GEORGE WEISS	Waiter
KATE FOX.....	Laundress
LILLIAN EMORY.	Laundress

BOARD OF HEALTH.

RANDOLPH L. WEBSTER	<i>Laundry Helper</i>
THOMAS HAND	"
JOHN SCHWANSK	<i>Driver</i>
TIMOTHY WALSH	<i>Driver</i>
MICHAEL LEVANT	<i>Driver</i>
HENRY PEI	"
STELLA WEITZENBERG	<i>Seamstress</i>

BUREAU OF CHILD HYGIENE

DIRECTOR

DR JULIUS LEVY 191 Littleton Avenue

CLINIC PHYSICIANS

DR HUMAN SHLAPPIN	18 Hillside Place
DR CHARLES RIBBINS	150 Clifton Street
DR EDVICE DRAGONETTI	51 Clifton Avenue

HYGIENE TEACHERS

JEANNETTE GURNEY	218 Hunterdon Street
CHARLOTTE WEINTHAR	15 Quitman Street
FRANCIS MILLER	75 Stratford Place
eva M. WAX	132 Court Street
EMMA MULLER	147 Clifton Avenue
ANNA K. JAHN	196 Jelliff Avenue
CHESTER COOPER	2 Clifton Avenue
WALTER C. GEORGINA	4 Johnson Avenue
MARYETTA SIBLEY	154 Garside Street
ELIZABETH ATKEN	1 North Seventh Street

SECRETARY

ANNA E. HORN 532 South Thirteenth Street

DISTRICT PHYSICIAN'S LINE

1st DISTRICT DR CHARLES F. HILL—Adam Street, Avenue F, Market Street, Broad Street and City Line

2nd DISTRICT—DR MARY BROADNAX Tichenor Street Clinton Avenue, Avenue F and City Line

3rd DISTRICT DR W. F. L. RODEMANN—Adam Street, Tichenor Street, Broad Street and City Line

4th DISTRICT—DR SAMUEL HIRSCHBERG Groad Street, Clinton Avenue, High Street, South Orange Avenue, Bergen Street, Warren Street, Sussex Avenue and City Line.

5th DISTRICT DR WILLIAM FISCHER Clinton Avenue, High Street, South Orange Avenue, Bergen Street, Warren Street and City Line.

6th DISTRICT—DR MEYER JEDEL—Fulton Street, Central Avenue, Sussex Avenue, Warren Street and City Line

BOARD OF HEALTH.

CLINICS AT THE CITY HOSPITAL

MEDICAL—9 A. M. Daily except Sunday

DISEASES OF CHILDREN Monday, Wednesday, Friday, 10 o'clock

SURGICAL—9 A. M. Daily except Sunday

GENITO URINARY—Monday and Thursday, 10 o'clock

DISEASES OF WOMEN Tuesday and Friday, 3 o'clock

DISEASES OF SKIN —Tuesday and Friday, 9:30 o'clock

SYPHILIS—Wednesday, 3 o'clock

EYE, EAR, THROAT AND NOSE Monday, 3 o'clock

NERVOUS DISEASES Friday, 2 o'clock

ORTHOPEDIC—Monday, 9 o'clock

DENTIST—Monday, Wednesday and Friday, 1 o'clock

TUBERCULOSIS—Children, including glands and joints, Monday, 10 o'clock.

PULMONARY Tuesday, 3 o'clock.

PULMONARY—Wednesday, 3 o'clock Laryngeal, Wednesday, 4 o'clock

PULMONARY—Thursday, 3 o'clock Children, Thursday, 4 o'clock

PULMONARY Friday, 3 o'clock

Examination Days for Admission to Sanatoriums:

VERONA—Monday, 10 o'clock

GLEN GARDNER—Wednesday, 10 o'clock

SOHO Thursday, 10 o'clock

DISPENSARY MEDICAL STAFF

DEPARTMENT OF SURGERY

NELSON K. BENTON, M. D. *Chief of Clinic*

ASSISTANTS

H. ROY VAN NESS, M. D. NATHAN J. FURST, M. D.

CHAS. G. CRANE, M. D. M. A. FLOWER, M. D.

OTTO LEWIS, M. D. ROYAL M. COHEN, M. D.

H. J. GIBERT, M. D.

DEPARTMENT OF MEDICINE

F. C. HORNSFORD, M. D. *Chief of Clinic*

ASSISTANTS

PHILIP COLON, M. D. G. B. EMERY, M. D.

RAYMOND MULLIN, M. D. FREDERICK A. ALLING, M. D.

JAMES E. McCORMICK, M. D. GRANT THORBURN, M. D.

ROBERT S. TOPPING, M. D.

BUREAU OF TUBERCULOSIS

THOS. N. GRAY, M. D. *Chief of Clinic*

ASSISTANTS

M. J. FINE, M. D. C. G. BERARDINELLI, M. D.

HERMAN BUSH, M. D. A. ROTHSEID, M. D.

DEPARTMENT OF EYE, EAR, NOSE AND THROAT

WELLS P. EAGLETON, M. D. *Chief of Clinic*

ASSISTANTS

E. A. CURTIS, M. D. S. HIRSCHBERG, M. D.

DEPARTMENT OF GYNAECOLOGY

WM. GAUCH, M. D. *Chief of Clinic*

ASSISTANT

MARY E. BROADNAX, M. D.

BOARD OF HEALTH

ORTHOPEDIC DEPARTMENT

SIDNEY A. TWINCHER, M. D. *Chief of Clinic*

ASSISTANT

CHAS E. SELVAGE, M. D.

GENITO URINARY AND CYSTOSCOPIC DEPARTMENT

C. R. O'CROWLEY, M. D. *Chief of Clinic*

ASSISTANTS

WM J. WARD, M. D.	I. I. D.
BENJ. A. FURMAN, M. D.	FRANK A. ROBERTS, M. D.
H C. POVEY, M. D.	W. F. L. RODFMAN, M. D.

PEDIATRIC DEPARTMENT

R. HUNTER SCOTT, M. D. *Chief of Clinic*

ASSISTANTS

HESSER G. McBRIDE, M. D.	H. H. STRAUBE, M. D.
F. J. TOBEY, M. D.	W. M. R. SILVERSTEIN
FRANK W. PINSKO, M. D.	

DEPARTMENT OF THE SKIN INCLUDING SYPHILIS

H. J. F. WALLHAUSER, M. D.	<i>Chief Division "A"</i>
Louis A. KOCH, M. D.	<i>Chief Division "B"</i>

ASSISTANTS

JOHN T. ENGLISH, M. D.	H. N. COMANDO, M. D.
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DENTAL DEPARTMENT

LEO J. McMANUS, D. D. S.

DEPARTMENT OF NERVOUS DISEASES

C. C. BELING, M. D. *Chief of Clinic*

ASSISTANTS

E. P. WHELAN, M. D.	H. W. POTTER, M. D.
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DEPARTMENT OF RECTAL DISEASES

DAVID A. KRAKER, M. D. *Chief of Clinic*

ANNUAL REPORT
OF THE
HEALTH OFFICER
FOR THE YEAR 1915

ANNUAL REPORT
OF THE
HEALTH OFFICER
FOR THE YEAR 1915

To the Commissioners of the Board of Health:

GENTLEMEN.—I beg to submit the following report of the work of the Divisions and Bureaus of the Board of Health for the twelve months ending December 31, 1915.

The state census taken the middle of last year gave the city a population of 366,721. There was, however, a considerable doubt of these figures being a correct statement, inasmuch as the methods of taking the census undoubtedly underestimated the existing conditions. A compromise figure of 375,000 has been generally accepted as more nearly the true estimate and this number has been taken in working out our annual mortality.

THE DEATH RATE

It is a satisfaction to record that our death rate for the year, 14.3 per 1,000 of the population, was the lowest death rate ever recorded in the city. In 1864 we find the general death rate among a Newark population of 203,923 was 22.28 per thousand. If this rate had persisted in 1915, there would have been 8,355 deaths, or 2,073 more than actually

occurred during the year. The following table shows the annual death rate in the city, per thousand of population, since 1894.

CRUDE DEATH RATES ACCORDING TO CENSUS AND INTERCENSAL ESTIMATED INCREASES

	POPULATION	NO. OF DEATHS	DEATH RATE
1894	100,000	1,618	16.18
1895	100,000	1,618	16.18
1896	100,000	1,618	16.18
1897	100,000	1,618	16.18
1898	100,000	1,618	16.18
1899	100,000	1,618	16.18
1900	100,000	1,618	16.18
1901	100,000	1,618	16.18
1902	100,000	1,618	16.18
1903	100,000	1,618	16.18
1904	100,000	1,618	16.18
1905	100,000	1,618	16.18
1906	100,000	1,618	16.18
1907	100,000	1,618	16.18
1908	100,000	1,618	16.18
1909	100,000	1,618	16.18
1910	100,000	1,618	16.18
1911	100,000	1,618	16.18
1912	100,000	1,618	16.18
1913	100,000	1,618	16.18
1914	100,000	1,618	16.18
1915	100,000	1,618	16.18
1916	100,000	1,618	16.18
1917	100,000	1,618	16.18
1918	100,000	1,618	16.18
1919	100,000	1,618	16.18
1920	100,000	1,618	16.18
1921	100,000	1,618	16.18
1922	100,000	1,618	16.18
1923	100,000	1,618	16.18
1924	100,000	1,618	16.18
1925	100,000	1,618	16.18
1926	100,000	1,618	16.18
1927	100,000	1,618	16.18
1928	100,000	1,618	16.18
1929	100,000	1,618	16.18
1930	100,000	1,618	16.18
1931	100,000	1,618	16.18
1932	100,000	1,618	16.18
1933	100,000	1,618	16.18
1934	100,000	1,618	16.18
1935	100,000	1,618	16.18
1936	100,000	1,618	16.18
1937	100,000	1,618	16.18
1938	100,000	1,618	16.18
1939	100,000	1,618	16.18
1940	100,000	1,618	16.18
1941	100,000	1,618	16.18
1942	100,000	1,618	16.18
1943	100,000	1,618	16.18
1944	100,000	1,618	16.18
1945	100,000	1,618	16.18
1946	100,000	1,618	16.18
1947	100,000	1,618	16.18
1948	100,000	1,618	16.18
1949	100,000	1,618	16.18
1950	100,000	1,618	16.18
1951	100,000	1,618	16.18
1952	100,000	1,618	16.18
1953	100,000	1,618	16.18
1954	100,000	1,618	16.18
1955	100,000	1,618	16.18
1956	100,000	1,618	16.18
1957	100,000	1,618	16.18
1958	100,000	1,618	16.18
1959	100,000	1,618	16.18
1960	100,000	1,618	16.18
1961	100,000	1,618	16.18
1962	100,000	1,618	16.18
1963	100,000	1,618	16.18
1964	100,000	1,618	16.18
1965	100,000	1,618	16.18
1966	100,000	1,618	16.18
1967	100,000	1,618	16.18
1968	100,000	1,618	16.18
1969	100,000	1,618	16.18
1970	100,000	1,618	16.18
1971	100,000	1,618	16.18
1972	100,000	1,618	16.18
1973	100,000	1,618	16.18
1974	100,000	1,618	16.18
1975	100,000	1,618	16.18
1976	100,000	1,618	16.18
1977	100,000	1,618	16.18
1978	100,000	1,618	16.18
1979	100,000	1,618	16.18
1980	100,000	1,618	16.18
1981	100,000	1,618	16.18
1982	100,000	1,618	16.18
1983	100,000	1,618	16.18
1984	100,000	1,618	16.18
1985	100,000	1,618	16.18
1986	100,000	1,618	16.18
1987	100,000	1,618	16.18
1988	100,000	1,618	16.18
1989	100,000	1,618	16.18
1990	100,000	1,618	16.18
1991	100,000	1,618	16.18
1992	100,000	1,618	16.18
1993	100,000	1,618	16.18
1994	100,000	1,618	16.18
1995	100,000	1,618	16.18
1996	100,000	1,618	16.18
1997	100,000	1,618	16.18
1998	100,000	1,618	16.18
1999	100,000	1,618	16.18
2000	100,000	1,618	16.18
2001	100,000	1,618	16.18
2002	100,000	1,618	16.18
2003	100,000	1,618	16.18
2004	100,000	1,618	16.18
2005	100,000	1,618	16.18
2006	100,000	1,618	16.18
2007	100,000	1,618	16.18
2008	100,000	1,618	16.18
2009	100,000	1,618	16.18
2010	100,000	1,618	16.18
2011	100,000	1,618	16.18
2012	100,000	1,618	16.18
2013	100,000	1,618	16.18
2014	100,000	1,618	16.18
2015	100,000	1,618	16.18
2016	100,000	1,618	16.18
2017	100,000	1,618	16.18
2018	100,000	1,618	16.18
2019	100,000	1,618	16.18
2020	100,000	1,618	16.18
2021	100,000	1,618	16.18
2022	100,000	1,618	16.18
2023	100,000	1,618	16.18
2024	100,000	1,618	16.18
2025	100,000	1,618	16.18
2026	100,000	1,618	16.18
2027	100,000	1,618	16.18
2028	100,000	1,618	16.18
2029	100,000	1,618	16.18
2030	100,000	1,618	16.18
2031	100,000	1,618	16.18
2032	100,000	1,618	16.18
2033	100,000	1,618	16.18
2034	100,000	1,618	16.18
2035	100,000	1,618	16.18
2036	100,000	1,618	16.18
2037	100,000	1,618	16.18
2038	100,000	1,618	16.18
2039	100,000	1,618	16.18
2040	100,000	1,618	16.18
2041	100,000	1,618	16.18
2042	100,000	1,618	16.18
2043	100,000	1,618	16.18
2044	100,000	1,618	16.18
2045	100,000	1,618	16.18
2046	100,000	1,618	16.18
2047	100,000	1,618	16.18
2048	100,000	1,618	16.18
2049	100,000	1,618	16.18
2050	100,000	1,618	16.18
2051	100,000	1,618	16.18
2052	100,000	1,618	16.18
2053	100,000	1,618	16.18
2054	100,000	1,618	16.18
2055	100,000	1,618	16.18
2056	100,000	1,618	16.18
2057	100,000	1,618	16.18
2058	100,000	1,618	16.18
2059	100,000	1,618	16.18
2060	100,000	1,618	16.18
2061	100,000	1,618	16.18
2062	100,000	1,618	16.18
2063	100,000	1,618	16.18
2064	100,000	1,618	16.18
2065	100,000	1,618	16.18
2066	100,000	1,618	16.18
2067	100,000	1,618	16.18
2068	100,000	1,618	16.18
2069	100,000	1,618	16.18
2070	100,000	1,618	16.18
2071	100,000	1,618	16.18
2072	100,000	1,618	16.18
2073	100,000	1,618	16.18
2074	100,000	1,618	16.18
2075	100,000	1,618	16.18
2076	100,000	1,618	16.18
2077	100,000	1,618	16.18
2078	100,000	1,618	16.18
2079	100,000	1,618	16.18
2080	100,000	1,618	16.18
2081	100,000	1,618	16.18
2082	100,000	1,618	16.18
2083	100,000	1,618	16.18
2084	100,000	1,618	16.18
2085	100,000	1,618	16.18
2086	100,000	1,618	16.18
2087	100,000	1,618	16.18
2088	100,000	1,618	16.18
2089	100,000	1,618	16.18
2090	100,000	1,618	16.18
2091	100,000	1,618	16.18
2092	100,000	1,618	16.18
2093	100,000	1,618	16.18
2094	100,000	1,618	16.18
2095	100,000	1,618	16.18
2096	100,000	1,618	16.18
2097	100,000	1,618	16.18
2098	100,000	1,618	16.18
2099	100,000	1,618	16.18
20100	100,000	1,618	16.18

The deaths during 1915 from the epidemic diseases of children show considerable decreases over those recorded in past years, with the exception of whooping cough. The mortality from typhoid fever, numbering eleven deaths during the year, is the lowest in the history of our records and indicates the improved sanitation of the city, as well as the purity of our water supply.

The following table shows the number of deaths from scarlet fever, diphtheria, and typhoid fever, recorded each year since 1894:

YEAR	SCARLET FEVER	DIPHTHERIA	TYPHOID FEVER
89	60		34
90	1	273	50
91	1	218	47
92	1	137	33
93	1	133	41
1894	11	124	60
95	10	143	50
96	10	103	57
97	9	105	47
1898	1	120	63
99	1	150	40
00	17	110	40
01	11	99	50
1899	12	95	69
1900	8	66	35
1901		105	39
02	22	104	44
03	1	74	37
04	11	91	26
05	16	110	30
06	7	41	26
07	1	49	11

The records for the year show a considerable decrease in the deaths from measles over the number recorded for 1914, on the other hand, there is an increase in the number of deaths from whooping cough and epidemic meningitis. The following table sets out these differences:

	1914	1915
Deaths from Measles	44	13
Deaths from Whooping Cough ..	19	28
Deaths from Epidemic Meningitis ..	8	14

The number of cases of communicable diseases reported during the year in the city, as compared with the number recorded for 1914, is shown in the following table.

DISEASES NOTIFIED	1914	1915
Scarlet Fever.....	1,696	619
Diphtheria.....	1,490	1,207
Measles.....	5,824	1,465
Whooping Cough	1,008	1,844
Typhoid Fever.....	250	108
Chicken Pox	1,567	1,500
Puerperal Ophthalmia.....	30	27
Malaria.....	-	51
Leprosy.....	11	216
Tuberculosis.....	149	1,100
Poliomyelitis.....	9	11
Epidemic Meningitis...	16	14

Cases of scarlet fever, diphtheria, and measles decreased considerably throughout the year. There was, however, a notable increase in the whooping cough which developed into an epidemic of some intensity and which reached its maximum in the summer and late autumn months of 1915. Cases of mumps were also reported with increasing frequency during the first six months of the year. The incidence of this disease, however, declined rapidly after June. There was also some slight increase in the tuberculosis and poliomyelitis cases reported during 1915. The typhoid fever cases reported in the city proved to be the lowest number in eighteen years.

PROGRESS OF THE CITY.

The wisdom of the City's founders in selecting its site showed that, even at that time, the early settlers "knew how" to prepare for the future. The measures carried out for the infant city have been amply justified by its growth from a country town of 11,000 persons in 1830 to a position among the great industrial centers of the country.

The rapid increase in industrial progress has, however, been accompanied by the many problems of health, it is to attempt to improve the health conditions of the稠密 populations of modern manufacturing cities.

HOUSING PROBLEMS

Prominent among these is the question of proper treatment of the situation arising out of the congestion of population in certain wards of the city. It has been estimated that more than two-thirds of the population of the city is over crowded. The presence of large numbers of these who invariably crowd together in certain streets and sections of the city has brought about new elements of difficulty in the administration of public health laws. All crimes have to be made to conform to religious custom, many of which are not acceptable to the modern ideas of sanitation and hygiene.

Such customs and superstitions have introduced new problems urgently requiring solution. Special or legislation has been passed for the control of many of these customs, in particular for the chicken markets in the city, many of which are still far from being conducted along clean lines. The sale of food from barrels and stands upon streets and sidewalks is still in need of adequate control.

OVER-CROWDING, AN EVIL.

One of the results of the congestion in some wards has been a decided increase in the development of the cheap tenement and lodging house. In many of these places over-crowding is present all the time, it being accompanied by insufficient sunlight, fresh air and ventilation, as well as a general uncleanliness due to inadequate bathing and sanitary facilities in buildings not originally intended to be used as apartments or tenement houses. It is the congestion of population in restricted areas that has much to do with the extent and frequency of epidemic diseases in the community.

DIFFICULTIES IN POLY GLOT COMMUNITIES

The control of all communicable diseases is faced by many difficulties amongst a poly-lingual population. Circulars of instructions upon any public health measure are required to be printed in several different languages and it is an advantage to have our Sanitary Inspectors speak at least one foreign language. The spread of a proper knowledge of sanitation and hygiene among the old and middle-aged foreign-born seems beset with many difficulties and at times it would seem as if against the prejudice of rooted ignorance and indifference, or propaganda for improved sanitation beats in vain.

WATER SUPPLY.

The effective patrol and supervision of the catchment area forming the watershed of the Pequannock River and its tributaries by the Newark City Board of Works has resulted in the obtaining of a water of exceptional purity for the city. Farms and other possible sources of pollution upon the river have been bought up by the city and by this policy of excluding danger the water supply has attained its present standard. The average daily supply of water to the city amounts to 43,000,000 gallons, or a per capita allowance of 115 gallons daily. Two sanitary inspectors of the board are detailed to make semi monthly trips to the watershed to obtain samples of water for chemical and bacteriological analysis.

THE SANITARY CONDITION OF THE CITY

The City of Newark is now well sewered and drained; comparatively few cesspools, privy-vaults or wells are in existence at this time and these are mostly situated in the outskirts of the municipality. Several sections of the city

are, however, inadequately provided with storm sewers of sufficient capacity to take care of unusual conditions due to floods. At such times, the department is over-burdened with complaints from householder regarding the flooding of cellars or with sewage due the breaking up of sewer upon roads and sidewalks. With the completion of the Passaic Valley Trunk Sewer, which will convey the sewage from the Passaic Valley towns, including Newark, as far out as Robbins Reef, N. Y., a distance of twenty six miles from Paterson, N. J., the pollution of the Passaic River will be considerably

Yours respectfully,

CHARLES V. CRASTER, M. D., D. P. H.,

Health Officer

RECEIPTS—1915

DISBURSEMENTS 1915

ANNUAL REPORT
OF THE
SANITARY DIVISION

ANNUAL REPORT OF THE SANITARY DIVISION

Charles V. Craster, M. D., D. P. H., Health Officer

DEAR SIR:—I herewith submit the report of the Sanitary Division for the year 1915.

The Sanitary Inspections made by the eighteen uniformed inspectors numbered 40,734, of which 37,367 were original inspections, the remainder being inspections made in response to complaints received.

ANTI FLY CAMPAIGN.

Special instructions were given to inspectors to inaugurate an anti-fly campaign during the year. Large fly posters for store windows and circulars for hand distribution were printed. Of the large posters 484 were distributed during the fly season. For the purpose of striking at the breeding places of flies, 4,166 stables and cow barns were visited throughout the city. The provision of proper manure bins provided with fly tight covers was required in all instances, as well as the cementing and proper drainage of all stable floors, to conform with the city ordinances. As having a direct bearing upon fly breeding, the garbage dumps of the city contractors were under constant surveillance fifty-seven inspections were made 24,588 yards throughout the city were also inspected, and 1,793 found in an insanitary condition. Special efforts were made to

insure a sanitary condition of slaughter houses and chicken markets, of which 2,382 inspections were made during the year. A vigorous campaign was carried on to require householders to provide themselves with properly covered garbage cans; 298 notices were served by inspectors for this purpose.

OVER-CROWDED AND INSANITARY HOUSES

Conditions indicating overcrowding were brought to the attention of the division during the year as existing to a great extent in the Third, Fifth and other wards of the city. As the result of a sanitary investigation of these places, thirty houses were condemned as unfit for habitation; eighty-three houses had insanitary living rooms condemned; thirty-nine tenement houses were found to be over crowded; 10,703 cellars were inspected, some of which were being used as dwellings, 1,533 of these were found insanitary. 273 dwelling houses were found to have no water supply, eleven had no water closets or privies; 185 had leaking roofs, 605 had defective storm leaders and gutters, 862 had defective plumbing, and 635 had defective water closets.

CHICKEN PERMITS AND COWBARNs.

The constant complaints concerning the keeping of chickens and cows within the city limits bring up the question as to whether such a condition should be tolerated in large cities. Last year 4,167 Chicken Permits were issued by the department. Complaints of cattle being received against the keeping of cows in built up localties and much may be said from a sanitary point of view against the continuation of such practices.

MOSQUITO CONTROL.

The division co-operated heartily with the County Mosquito Eradication Commission and complaints turned in by the commission have received prompt attention. As a result of inspections, 224 vacant lots were found to be in an insanitary condition. Stagnant water suitable for mosquito breeding was found to exist in 108 instances.

ANTI-SPITTING ORDINANCES.

The inspectors of the division made eighteen arrests for violating the city anti-spitting ordinances during the year. Penalties were imposed in all cases. Warning cards reminding persons of the city anti-spitting ordinances were given to inspectors for distribution to violators. 432 anti-spitting signs were posted in various sections of the city.

BAKERIES AND LUNCH ROOMS.

The sanitary condition of bakeries and lunch rooms was supervised during the year, 402 such premises being inspected. 526 cards, printed in five languages, forbidding the handling of food by customers, were distributed in market and store districts.

A monthly lecture to the Sanitary Inspectors was inaugurated during the year, the subjects being chosen so as to be of an educating value in sanitation.

A firm stand has been taken against the insanitary and unsightly cuspidor. These objects have been removed from our office and it is hoped the example will be followed. Dirty cuspidors are a menace to health.

DETAILED REPORT OF THE SANITARY DIVISION

Inspections from complaint cards.....	3,267
Inspections verified.....	2,555
Inspections, no cause	11
Number of original inspections made	1
Total number of inspections made	1
Number of written notices served	1,8
Abatements from written notices	1,1
Verbal notices served	1,1
Number of abatements from verbal notices	1,1
Total number of abatements	1,1
Number of hours in court	1
Cisterns and wells inspected	1
Samples of cistern and well water examined	1
Number of cisterns and wells closed	1
Sewer connections ordered	1
Sewer connection claims inspected	1
Sewer connections to carb line	1
Cesspools inspected	1
Alleyways inspected	1
Alleyways inspected found unsanitary	1
Streets found to need cleaning	1
Cellars inspected	763
Cellars inspected found unsanitary	1
Ashes accumulations	1
Garbage accumulations	81
Septic tanks	10
Defective	1
Stagnant water on vacant lots..	108
Defective water pipes.....	390
Houses with unsanitary living rooms.....	83
Houses unfit for habitation.....	30
Number of expectorating signs posted throughout City	492
Number of tenement houses found over-crowded	39
Special inspections made	12
Number of bakeries inspected	214
Number of lunchrooms inspected	188
Number of factories inspected.....	33

Inspections of scavenger dumps.....	57
Inspections of picture theatres.....	32
Number of cases investigated.....	43
Visitors' cards delivered to commissioners.....	73
Circulars on City Health Law.....	91
Official calls to City Hall.....	608
Visits to owners and agents of real estate.....	154
Barber shops inspected	94
Weekly bulletins delivered.....	105
Warning cards delivered on the handling of foodstuffs.....	526
Swat-the fly cards delivered	184
Soda fountains inspected.....	24
Warning cards handed to persons violating the spitting ordinance	190
Clean-up circulars delivered.	18,000
No. of special notices served to provide garbage receptacles.....	298
Abatements from same	114
Six inspectors detailed eight half days during the year to arrest violators of the spitting ordinance	
Number of arrests made for violations of the spitting ordinance and penalties imposed.....	18
Slaughter house inspections	2,382
Slaughter houses found in an unsanitary condition.....	43
Houses not provided with water closets or privy vaults.....	11
Houses with no water supply	273
Houses with leaking roofs.....	185
Storm gutters and leaders defective	605
Hydrants in yards defective.	20
Privy vaults and houses over same unsanitary.....	51
Pr.vy vaults full.....	138
Cesspools full..	72
Privy houses delapidated	27
Privy vaults and houses over same ordered reconstructed	24
Privy vaults ordered cleaned and filled	109
Yards inspected	178
Yards in an unsanitary condition,	173
Plumbing defective.	802
Water closets defective.	637
Pits under water closets defective and not water-tight.....	96
Stables inspected, including cow stables	4,166
Manure accumulation	703
Number of animal permits issued	287

Number of animals licensed.....	111
Total number of nuisances found	1192
Total number of re-inspections.....	74
Number of inspections for milk licenses	10
Number of inspections for ice licens-	0
Number of inspections for chicken permits.	4,107
Number of inspections of public and parochial schools....	904
Contagious disease reports delivered to Sunday Schools ..	1,946
Contagious disease cards delivered to doctors	200
Number of notices served for other inspectors	1,220
Number of cases of refuse collected by the Sanitary Division	928
Number of cases of refuse removed from the streets	31
Number of cases discontinued on payment of costs and abatement of nuisances	42
Number of summonses issued for non-compliance	45
Number of cases discontinued prior to summons being served, the work having been done	110

The Sanitary Inspectors make monthly reports of the collection by the Scavenger Contractor of ashes and garbage in their various districts, a copy of which is submitted to the Board of Street and Water Commissioners.

Respectfully submitted,

WILLIAM H. YOUNG,

Clerk Sanitary Division.

THE DIVISION OF PLUMBING.

The work of this Division is carried out by six uniformed inspectors and one chief inspector. Each plumbing inspector has control of all plumbing work carried out in his district as well as the inspection of all house drains and sewers laid, the plans for which are required to be filed with the Board of Health. All such work before completion must be tested and approved by the district plumbing inspector.

THE WORK OF THE DIVISION.

During the year the number of plans filed was 1,954, of which 110 were rejected. 5,382 plumbing inspections were made and 2,183 water and smoke tests carried out.

NEW PROBLEMS

Considerable thought has been given to the problems arising from the installation of new factories upon the meadows. The ground is mostly water soaked and at high tide the water level is within a few inches of the surface. There being no sewage system the problem of efficient sewage disposal from industrial plants has become a pressing concern. A solution has been affected by providing septic tanks wherever possible.

Respectfully submitted,

JOHN L. SULLIVAN,
Chief Plumbing Inspector

**REPORT OF THE DETAILED INSPECTOR FOR
RABIES.**

There is an excessive proportion of dog bites per person in Newark as compared with cities of greater population. The control of rabies is immediately connected with the prevalence of biting dogs. The control of dogs in the city is a matter of concern to the municipality.

The State law requires local Boards of Health to enforce the Rabies Law of 1915. For this reason local Boards of Health should have the names and addresses of all owners of dogs in the city. In addition a brief description of each dog should be recorded so that in case of an epidemic of rabies all owners could be notified of the necessary quarantine.

The following is a record of the work done during 1915 by the inspector detailed to the Bacteriological Division to investigate suspected cases of rabies. A record in detail of each case and its subsequent history is kept on file at the Laboratory.

Number of persons bitten by dogs.....	541
Number of persons bitten by cats.	18
Number of persons bitten by horses.....	6
Number of persons bitten by rats	1
Total number of persons bitten and cases investigated	566
Number of dogs bitten.....	86
Number of cats bitten.....	8
Number of cows bitten and destroyed	2
Number of calves bitten and destroyed..	6
Number of original inspections.....	792
Number of reinspections....	645
Number of dogs sent to pound	143
Number of dogs destroyed.....	138
Number of cats sent to pound.....	12

Number of cats destroyed	12
Complaints of vicious dogs investigated	31
Number of hours in court.	7
Number of final inspections	45
Total number of inspections	1,822

The following table shows the number of persons bitten, suspected animals' brains examined, positive and negative cases and persons given anti-rabic treatment for past six (6) years.

YEARS	Persons Bitten Cases Investigated	Suspected Animals Examined	Positive Cases	Negative Cases	Persons Given Anti-Rabic Treatment
1910	218	33	21	12	40
1911	350	28	13	15	26
1912	536	16	21	25	62
1913	612	43	17	26	41
1914	509	30	7	23	13
1915	566	38 *	8 *	32	3
Totals	2,791	218	87	133	185

* Two positive cases not examined bodies destroyed.

Respectfully submitted,

CHARLES F. CONRAD,

Detailed Inspector

**REPORT OF SPECIAL DETAILED INSPECTORS
FOR THE YEAR 1915.**

The following visits were made to the Watersheds, Cedar Grove and Belleville Reservoirs to collect samples of our city water supply for bacteriological and chemical examination. Samples of water were also obtained in the Board of Health office and other points in the city as well as from private wells, cisterns, springs and streams in and out of the city for examination

Number of visits made to watersheds..	26
Number of visits made to Cedar Grove Reservoir	21
Number of visits made to Belleville Reservoir	24
Total	71

Samples of city water supply were taken at the following points and delivered to the Bacteriologist and Chemist:

Oak Ridge Stream	34
Clinton Stream	34
Kanouse Brook	34
Echo Lake Stream	34
Macopin Intake	34
Cedar Grove Reservoir	70
Belleville	58
Board of Health Office	23
Prudential Building, 763 Broad Street	10
115 Jackson Street	1

SAMPLES OF WATER TAKEN FROM PRIVATE WELLS

1 Arch Street, driven well	2
2 Arch Street, driven well	2
76 Richmond Street, driven well	1
496 Feilingshausen Avenue, driven well	1
155-157 Summit Street, driven well	2
777 High Street, dug well	1

OUT-OF CITY SAMPLES OF WELL WATER

Charlottesville, N. J., dug well .....	.....	.....
West Milford, N. J., dug well.	.....	1
Newfoundland, N. J., driven well	.....	1
Hilton, N. J., dug well	.....	1
Total	.....	3
Number of inspections made in watersheds .....	.....	35
Calls made in the watersheds .....	.....	19

The toilets on the Susquehanna R. R. cars were found open by the detailed inspectors while passing through the Watershed Restricted Area on February 23rd, April 13th and 27th, and June 23, 1915

Special inspections made.....	.....	11
Inspections made with other inspectors	.....	23
Poultry slaughter houses inspected	.....	23
Lodging houses inspected	.....	5
Dance halls inspected	.....	8
Moving picture theatres inspected	.....	11
Open-air amusement parks inspected	.....	2
Scavenger dumps inspected	.....	11
Wells inspected	.....	6
Cemeteries inspected	.....	7
Baby farms inspected	.....	1
Bird stores inspected..	....	1
Public bath houses inspected	.....	2
Slaughter houses inspected	.....	6
Excursion boats inspected	.....	1
Parochial schools visited	.....	3
Dispensary cases investigated	.....	1
Calls made in reference to health matters	.....	77
Time spent in office	.....	75 days
Time on special work.	.....	13
Time at watershed	.....	53
Time on health matters out of city	.....	5
Time in Court.	.....	96 hours

Number of poultry slaughter houses

Public	1
Private	-

Number of licensed dance halls	80
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Number of licensed motion picture theatres	52
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Number of licensed open air motion picture theatres	1
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Number of public lodging houses	11
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Respectfully submitted,

ANDREW J. BRADY,

BENJAMIN CAHILL,

Detailed Inspectors.

ANNUAL REPORT
OF THE
Division of Contagious Diseases
FOR THE YEAR 1915

ANNUAL REPORT

OF THE

Division of Contagious Diseases

FOR THE YEAR 1915

To Charles V. Craster, M. D., D. P. H., Health Officer.

DEAR SIR—I beg to submit the following report of the Contagious Diseases Division for the year 1915.

OUR POPULATION.

The estimated population for the year is 375,000. The last U. S. Census of 1910 gave the figures 347,469.

TUBERCULOSIS

Tuberculosis heads the list of communicable diseases reported during the year with 2,146 cases. The following table gives the tuberculosis reported by wards during each month of 1915:

TUBERCULOSIS REPORTED BY WARDS 1915

Month	Total											
	1	2	3	4	5	6	7	8	9	10	11	12
January	1	1	1	1	1	1	1	1	1	1	1	1
February	1	1	1	1	1	1	1	1	1	1	1	1
March	1	1	1	1	1	1	1	1	1	1	1	1
April	1	1	1	1	1	1	1	1	1	1	1	1
May	1	1	1	1	1	1	1	1	1	1	1	1
June	1	1	1	1	1	1	1	1	1	1	1	1
July	1	1	1	1	1	1	1	1	1	1	1	1
August	1	1	1	1	1	1	1	1	1	1	1	1
September	1	1	1	1	1	1	1	1	1	1	1	1
October	1	1	1	1	1	1	1	1	1	1	1	1
November	1	1	1	1	1	1	1	1	1	1	1	1
December	1	1	1	1	1	1	1	1	1	1	1	1
Totals	191	151	258	102	115	113	104	76	104	120	112	108

WHOOPING COUGH

The whooping cough reported to the Board of Health during the twelve months of 1915 amounted to 1,854 cases. This was an increase of 846 cases over the number reported for 1914. The prevalence of whooping cough in 1916 constituted an epidemic, which commenced in November, 1914, with 108 cases. During December of 1914 and for every month of 1915 the number reported per month in the city was never below the 100 mark. The height of the epidemic was reached in the month of September with 225 cases, since which the numbers have declined. A special ordinance was passed by the Board of Health requiring the wearing of a yellow arm band by all children under 10 years suffering from whooping cough and no such child is allowed to appear in public meeting places or public conveyances. This ordinance came into effect September 1st, 1915. The following table gives the whooping cough cases reported by wards during each month of 1915:

WHOOPING COUGH REPORTED BY WARDS 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	10																10
February	4																12
March	7																7
April	3																3
May	8																8
June	5																5
July	5																5
August	2																2
September	9	8	1														17
October	9																9
November	4	1															5
December	6	10	5	7	4	3	4	9	5	10	9	6	14	4	13	108	
Totals																	1854
	72	44	7	64	140	67	124	103	126	81	177	194	170	47	16		

MEASLES.

The number of cases of measles reported to the Board of Health during 1915 was 1,465. This constitutes a particularly low record and much below 1914, when the number was 5,824. Measles cases reported by wards during the various months of 1915 are shown in the following table:

MEASLES REPORTED BY WARDS 1915.

MONTH	Wards												Total				
	1	2	3	4	5	6	7	8	9	10	11	12					
February	2	5	2	4	1	3	2	-	1	1	3	2	28				
March	4	1	1	....	2	1	1	1	2	1	1	2	27			
April	1	3	1	1	2	5	2	4	1	1	7	1	33				
May	7	5	1	1	2	5	1	1	1	10	1	1	47				
June	2	1	21	-	6	1	3	1	11	6	3	9	4	102			
July	-	-	-	-	-	-	-	-	-	-	-	-	1				
September	-	1	5	2	1	5	3	9	1	9	2	1	41				
October	-	-	7	1	15	1	16	11	2	4	2	3	62				
November	-	2	12	2	14	2	3	11	70	1	80	12	7	290			
December	-	2	2	57	18	163	8	8	12	58	115	6	82	37	2	68	639
Census	1	1	4	1	4	2	1	8	2	1	1	4	6				

MUMPS

Mumps cases reported amounted to 1,460, which was an increase of 811 over 1914. The incidence of this disease during the spring months is well shown in the table, 1,233 cases being reported during the first six months of the year:

MUMPS REPORTED BY WARDS 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total					
January	19	2	35	-	3	16		2	6	-	1											
February	-	-	4	-	-	-	-	-	20	10	8	3	7	22	4							
March	-	-	-	-	-	-	13	21	15	11	12	4	16	21	7	8						
April	-	-	-	-	-	-	1	33	25	16	8	19	9	19	1	1						
May	-	-	-	-	-	-	37	7	-	-	-	-	-	-	-	4						
June	-	-	-	-	-	-	3	9	3	10	4	17	10	19	4	4						
July	-	-	-	-	-	-	5	1	1	1	6	4	2	2	4							
August	-	-	-	-	-	-	1	2	0	1	1	-	3	-	-	26						
September	-	-	-	-	-	-	2	-	1	1	-	7	3	2	29							
October	-	-	-	-	-	-	3	-	-	-	4	1	-	1	21							
November	-	-	-	-	-	-	1	-	9	2	3	1	2	1	6	37						
December	-	-	-	-	-	-	6	-	6	3	2	3	15	-	2	55						
Totals							80	1337	5	67	86	30	127	65	107	46	57	68	161	96	15	140

SCARLET FEVER

The scarlet fever cases reported during 1915 amounted to 618, the lowest recorded in ten years. The following table shows the prevalence of the disease since the year 1894.

SCARLET FEVER CASES SINCE 1894

Year	Cases	Year	Cases
1894	.. 1,145	1906	616
1895	623	1907	773
1896	537	1908	1,500
1897	1,358	1909	1,786
1898	478	1910	1,664
1899	607	1911	.. 1,027
1900	708	1912	698
1901	643	1913	.. 1,036
1902	557	1914	1,696
1903	779	1915	.. 618
1904	1,649		
1905	1,309	Total	.. 21,807

The following table gives the cases of scarlet fever reported by wards during each month of 1915.

SCARLET FEVER REPORTED BY WARDS 1915.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	84
February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	60
March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	72
April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	83
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	57
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	56
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	12
August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	33
September	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15
October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	33
November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	11
December	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	72
Totals	6	25	27	33	2	34	17	49	35	36	29	28	40	51	46	7	638

DIPHTHERIA.

There were 1,212 cases of diphtheria reported in the city during the year. This number was 283 less than in 1914. The following table gives the occurrence of the disease in the city since 1895:

Year	Cases	Year	Cases
1895	1,321	1905	1,233
1896	1,261	1907	1,032
1897 ..	969	1908	888
1898 ..	1,019	1909	1,373
1899 ..	1,170	1910	888
1900 ..	1,417	1911	1,339
1911 ..	1,154	1912	1,168
1913 ..	985	1913	1,564
1914 ..	1,150	1914	1,483
1915 ..	1,083	1915	1,212
1916 ..	1,014		

The following table gives the occurrence of the disease by months and wards during 1915:

DIPHTHERIA REPORTED BY WARDS 1915

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	14	2	22	1	4	11	2	6	11	4	9	5	10	15	3	12	146
February	7	4	21	3	4	7	4	0	8	15	8	2	9	15	8	12	138
March	19	5	17	4	4	14	3	4	7	10	5	4	21	23	1	17	160
April	4	6	10	8	8	4	1	2	4	1	7	5	11	3	6	90	
May	8	3	8	5	5	3	2	3	6	13	5	7	7	5	3	33	
June	4	1	4	3	4	7	1	4	1	1	6	5	6	1	3	51	
July	2	5	+	0	1	1	2	2	2	1	11	2	1	15	58		
August	3	11	2	3	1	2	1	4	2	3	1	10	2	2	4	51	
September	1	1	12	2	6	4	2	5	6	2	3	13	5	3	6	71	
October	3	4	10	5	5	2	3	7	5	2	8	14	12	2	5	90	
November	11	2	11	2	4	10	7	5	3	8	8	5	10	9	7	11	112
December	5	30	2	2	10	13	10	5	15	6	9	17	16	5	14	100	
TOTAL	87	87	90	87	84	84	84	84	84	84	84	84	84	84	84	84	1080

TYPHOID FEVER.

There were 108 cases of typhoid fever reported during the year, being the lowest number recorded for eighteen years:

Year	Cases	Year	Cases
1894	89	1906	336
1895	149	1907	330
1896	106	188	181
1897	103	189	24
1898	176	1910	178
1899	215	1911	208
1900	311	1912	143
1901	312	1913	217
1902	28	1914	280
1903	330	1915	168
1904	24		-
1905	228	Total	108

TYPHOID FEVER REPORTED BY WARDS - 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
JANUARY	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
February	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
March	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
April	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
May	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
June	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
July	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
August	1	2	-	4	1	1	-	2	-	1	3	-	1	-	-	-	17
September	1	3	1	-	1	1	2	-	-	-	2	-	4	1	2	-	20
October	-	2	-	-	-	-	-	-	-	-	1	-	2	-	-	-	9
November	1	1	2	1	-	-	-	-	-	-	1	-	2	2	2	-	12
December	-	1	-	-	-	-	-	-	-	-	1	-	1	1	1	-	7
Total	7	7	14	9	15	8	9	7	4	6	7	5	5	8	6	9	108

CHICKEN POX (OR VARICELLA).

There were 1,400 cases of chicken pox reported throughout the year. The prevalence of the disease is associated with the winter and early spring months.

CHICKEN-POX REPORTED BY WARDS - 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	
January	24	7	21	-	4	32	4	39	6	12	12	5	24	1	31	25	269	
February	-	4	33	1	-	14	8	16	24	5	22	8	24	11	21	29	229	
March	9	-	3	1	4	9	8	21	0	6	18	13	13	4	12	-	169	
April	30	-	21	-	4	16	9	7	4	9	4	1	14	1	8	18	175	
May	19	1	1	8	-	7	5	6	6	14	4	4	5	11	3	11	-	136
June	6	-	6	4	-	2	4	7	6	3	2	2	19	1	10	-	116	
July	1	-	26	2	-	-	-	-	-	2	1	-	4	1	3	-	43	
August	-	1	1	3	1	2	-	-	-	-	-	1	-	2	-	-	11	
September	-	1	-	-	-	-	1	2	-	-	1	2	1	1	-	-	10	
October	3	1	4	-	2	1	-	-	1	-	-	14	1	2	-	-	34	
November	-	1	6	-	2	2	1	2	9	1	-	6	2	2	1	15	-	62
December	5	5	6	-	2	4	3	10	30	6	4	16	7	15	1	30	-	146
Total	114	64	194	26	41	89	50	100	103	60	90	45	107	131	84	156	-	1400

INFANTILE PARALYSIS.

Twelve cases of infantile paralysis were reported during 1915. Our record of the disease is as follows:

Year	Cases
1910	7
1911	33
1912	0
1913	24
1914	0
1915	12

PURULENT OPHTHALMIA.

There were 27 cases of ophthalmia neonatorum reported in the city during 1915.

1913	29 cases
1914	, 30 cases
1915	, 27 cases

EPIDEMIC MENINGITIS.

During the year 17 cases of epidemic meningitis were reported, with 14 deaths. The following table shows the occurrence of the disease and the high mortality of the disease since 1905.

Year	Cases	Deaths
1905	110	90
1906	25	20
1907	55	38
1908	11	11
1909	8	7
1910	3	1
1911	7	5
1912	7	5
1913	17	8
1914	16	8
1915	17	14

MALARIA.

Malaria, formerly a disease much more prevalent in the city, still exists to some extent, 57 cases of the disease being reported during 1915, which is an increase of thirteen over the number reported in 1914. The following is a list of the monthly incidence:

MALARIA—1915.

Month	Cases	Month	Cases
January	2	August	10
February	1	September	11
March	2	October	9
April	2	November	2
May	4	December	2
June	6		—
July	6	Total	57

TRACHOMA

There were 39 cases of trachoma of the eyes reported during the year, showing a decrease of 27 over the number reported during 1913.

INDUSTRIAL DISEASES.

Under the State Laws, Chapter 357, Laws of 1912, the following occupational diseases were reported during the year 1915. The table below gives the comparison between 1913, 1914 and 1915.

Disease	1913	1914	1915
Lead poisoning	40	48	34
Arsenic poisoning	1	2	
Mercury poisoning	1	..	1
Compressed air disease	1	..	1
Phosphorus poisoning			1

MENTAL DEFICIENCY AND EPILEPSY.

Under the State Laws, Chapter 182, Laws of 1912, physicians are required to report all cases of epilepsy and mental deficiency coming to their notice. The following table gives the number reported for three years:

Disease	1913	1914	1915
Epilepsy	42	62	32
Mental deficiency	109	61	79

Respectfully submitted,

JOHN J. GREENE,

Clerk



Chung Hui-chin, 32, right



Liaison - C. D. S. - v

ANTITOXIN AND CULTURE STATIONS BY WARDS

Ward	STATION	Street and Number	| Telephone No.
First	A. R. Bland	Seventh Avenue and St.field Street	143 B B
First	W. R. Seidler	96 Belleville Avenue	111 B B
First	Second Precinct Police	Summer and Seventh Avenues	20 Market
Second	St. Mary's Hospital	Central Avenue and High Street	101 Market
Second	City Dispensary	Plate and William Streets	22 Market
Second	C. Holzhauer	Broad and Market Streets	111 Market
Second	E. P. Fielding	925 Broad Street	914 Mulberry
Second	C. W. Monk	14 Market Street	201 Mulberry
Second	First Precinct Police	Court and Washington Streets	510 Market
Third	St. Barbara's Hospital	881 High Street	1 Market
Fourth	Firemen's Pharmacy	Broad and Market Streets	511 Market
Fourth	A. E. Sayre	482 Broad Street	511 Market
Fourth	Max Lewitt	Broad and Fulton Streets	181 Market
Fifth	L. M. Greenfield	201 Walnut Street	3008 Market
Fifth	Seidler's Drug Co	21 Ferry Street	8641 Market
Sixth	J. P. Smit	45 South Orange Avenue	1314 Mulberry
Sixth	L. L. Staehle	169 South Orange Avenue	1339 Market
Sixth	City Hospital	Fairmount Avenue	9300 Market
Seventh	D. Strauss	62 Springfield Avenue	4635 Market
Seventh	P. J. Corrigan	25 Wallace Place	3205 Market
Eighth	Ellwood Pharmacy	190 Washington Avenue	1041 B B
Eighth	Oriental Pharmacy	289 Belleville Avenue	453 B B
Eighth	H. J. Quin	187 Bloomfield Avenue	269 B B

ANTI-TOXIN AND CULTURE STATIONS BY WARDS *Continued*

23

Ward	STATION	Street and Number	Telephone No.
Eighth	Eighth Precinct Police	Washington Avenue	5400 Market
Ninth	Geo. L. Munn & Bro	77 Lincoln Park	304 Mulberry
Tenth	G. F. Tempel	10 Clinton Avenue	818 Waverly
Eleventh	J. B. Foster	Orange Street and Roseville Avenue	151 B, B
Twelfth	Fifth Precinct Police	Orange and Sixth Streets	5400 Market
Thirteenth	O. Schatz	131 Hamburg Place	151 Market
Fourteenth	O. Von Gerber	200 Ferry Street	1614 Market
Fifteenth	Bowery Pharmacy	28 Fleming Avenue	1014 Market
Sixteenth	Third Precinct Police	Van Buren Street	5400 Market
Seventeenth	A. Marquer,	1041 South Orange Avenue	2878 Market
Eighteenth	A. R. New	661 Springfield Avenue	2411 Waverly
Nineteenth	Seventh Precinct Police	South Orange Avenue	5400 Market
Twenty-first	F. L. Feind	16 Belmont Avenue	2191 Waverly
Twenty-second	Ang Koelble	12 Springfield Avenue	1534 Waverly
Twenty-third	Fourth Precinct Police	Seventeenth Avenue	5400 Market
Twenty-fourth	F. Broch	398 Central Avenue	2301 Market
Twenty-fifth	L. H. D. A.	Central Avenue and Fifth Street	151 B, B
Twenty-sixth	C. P. Moll	102 Central Avenue	1319 Market
Twenty-seventh	H. H. Gray	1 Clinton Avenue	2468 Waverly
Twenty-eighth	G. J. Keller	191 Avon Avenue	1102 Waverly
Twenty-ninth	W. J. Witt	8-1 Clinton Avenue	2871 Waverly
Thirty-first	Sixth Precinct Police	Hunterdon and Bigelow Streets	5400 Market

BOARD OF HEALTH.

CULTURE COLLECTORS

REPORT OF DISINFECTING STAFF 1915

Charles V. Craster, M. D., D. P. H., Health Officer:

DEAR SIR.—The activities of the Disinfecting Staff have been considerably increased since September, 1914, when the new ordinance requiring the wearing of arm bands by children suffering from whooping cough came into effect. The number of visits paid to quarantined houses by the Inspectors increased from 2,859 in 1914 to 5,445 in 1915.

The following is a detailed account of the work done during the past year, as compared with the previous year.

HOUSES QUARANTINED

		1914	1915
Diphtheria, including membranous croup, placarded	1,407	1,203	
Scarlet fever, placarded	1,695	1,8	
Typhoid fever, not placarded...	242	97	
Cerebro-spinal meningitis	16	16	
Infantile paralysis	7	9	
Whooping cough	0	611	
Total number of cases	3,367	2,544	

DISINFECTIONS.

Diphtheria, including membranous croup	1,312	1,145
Scarlet fever...	1,55	565
Tuberculosis	516	750
Cerebro-spinal meningitis	12	21
Infantile paralysis	3	3
Special	807	735
Total number of houses.	4,175	3,119

Number of rooms disinfected	12,798	9,785
Number of cubic feet of air space	12,48,000	10,035,000
Number of control tests	..	1,733
Number of visits to quarantined houses	..	2,859
Number of nuisances found	.....	88
Number of funerals supervised	.....	49
		32

Respectfully submitted,

SAMUEL KNOTT,

Chief Inspector.

REPORT OF THE DIVISION OF FOOD AND DRUGS

Dr. Charles V. Craster, Health Officer, Newark Board of Health, Newark, N. J.

DEAR SIR:—Herewith I beg to submit the report of the Division of Food and Drugs for the year 1915:

Duties of the Division.—The work of the Division is mainly concerned in the supervision of the food supply, and the enforcement of the State Laws and City Ordinances relating to the adulteration of all food and drugs as well as supervision over the sale of milk in the city, the sanitary condition of places where food is prepared and the methods employed in the handling of food, and the control of food exposures.

Divisional Staff.—The routine work of the Division is carried on by one Chief Inspector of Food and Drugs, three divisional inspectors, one stenographer. The meat inspector and the veterinarian, although under the Sanitary Division, do most of their work in this Division.

Exposure of Food.—The exposure of food products and the requirements for the clean handling of our food are well covered by the State Sanitary Act of 1909. The enforcement of this law, however, requires the constant vigilance of the inspectors for the reason that much food is sold on the streets from pushcarts and sidewalk stands usually by a careless and ignorant class of itinerant vendors.

The Pretzel Boy.—A particularly unhygienic seller of foodstuffs is the pretzel boy. These boys are irresponsible, dirty, frequently diseased and should not be allowed to handle any food for sale to be consumed in the condition as sold. An active movement against this undesirable seller of food has been prosecuted vigorously. Some improvement has been affected, most of the boys now having glass covers over their wares, but their bodily condition has not shown much improvement and it is a question whether the sale of food under these circumstances is not a violation of the pure food laws of the State.

The Milk Supply.—The most important work of this Division has been the supervision of the milk supplied to the city. The grades of milk coming into the city and its quantity are as follows:

GRADES OF MILK

All milk sold in the City of Newark is under the control of the Board of Health and is graded in the following manner:

Certified Milk.—Produced under the direction of the Medical Milk Commission.

Grade A, Raw.—Produced from tuberculin tested cows and dairies scoring not less than 65% on the Government Score Card. Bacterial limit, 100,000 per c. c.

Grade A, Pasteurized.—Produced from cows free from disease and from dairies scoring not less than 65% on the Government Score Card. Bacterial limit, 30,000 per c. c.

Grade B, Pasteurized—Produced from cows free from disease and from dairies scoring not less than 40% on the Government Score Card. Bacterial hmit, 50,000 per c. c.

Grade C Milk This milk is used for cooking or industrial purposes. Bacterial limit more than one million per c. c., and produced from dairies scoring less than 40% on the Government Score Card. This milk is required to be heated to 200° Fahrenheit for two minutes before sale.

A Start Made in Inspecting Dairies.—The first five months of the year practically no dairy inspection was done except those in our city or suburbs, which could be reached by trolley or automobile. This was on account of the lack of assurance of money to be appropriated for this work. In June a commencement was made in scoring dairies at Papakating, N. J., and two inspectors from this Department continued on this work until December 24, 1915, scoring 1,735 dairies and 67 creameries.

Better Supervision of Milk Licenses. Previous to this year any vender could obtain a milk license for \$2.00, but in order to obtain a regular license for grade A raw milk, a certificate of the tuberculin test of the cattle producing the milk had to be furnished, the dairy was required to score 65% or more and the sterilization of all the bottles in which this milk must be sold, was required.

Pasteurized Milk Supervision.—For a license for grade A pasteurized milk the pasteurizing plant must first be approved by this Board, dairies inspected and should average 65% or more and the sterilization of all the bottles in which this milk must be sold required. On these two grades of milk the work is almost completed and we know today who can be licensed to sell both these grades, which was unknown until now.

Grade B Pasteurized Milk Supervision. For a license to sell grade B pasteurized milk the pasteurizing plant must first be approved by this Board dairies inspected and must average 40% or more. On this grade of milk we have been unable to grant very many licenses on account of the protest of the manufacturers to the milk or because compelling dealers to sell all-bottled milk.

The amount of milk supplied to the city daily averages 135,000 quarts. The supply may be estimated as follows under the following grades:

Raw milk, 45,000 quarts. (Suburban dairies, 40,000 quarts, city dairies, 5,000 quarts.)

Certified milk, 800 quarts.

Grade A pasteurized milk, 7,500 quarts.

Grade B pasteurized milk, 80,000 quarts.

Grade C (heated) milk, 1,700 quarts.

The raw milk is mostly a city supply and is produced from the 3,000 cows in the 110 dairies in the city and suburbs. These cows are all required to be tuberculin tested. The pasteurized milk is produced from 3,000 farms in New Jersey, New York and Pennsylvania and is shipped by rail to the city by the Delaware and Lackawanna, the Erie, Lehigh Valley and Central railroads. At the present time the bulk of this milk is pasteurized at creameries in the neighborhood where it is produced.

Sale of Loose Milk Will Be Prohibited. This will be accomplished when the two large pasteurizing plants are completed in this city. This puts six of the largest wholesale dealers in two plants. This will also put bottled milk in Newark and will bring pasteurization close at home where we will have absolute supervision over same.

An Inspection of Soft Drink Factories. -In 1912 the soft drink factories in the city were inspected by the Food and Drug Department and a number of samples taken and analyzed, and found in most cases to contain saccharin and highly colored coal tar dyes. It was found that in many cases soft drinks were being prepared in cellars of tenement houses, stables, sheds and yards where the sanitary conditions were undesirable.

Conditions Found Suggested New Law In consequence of the conditions found in these places the co operation of the State Board of Health was asked and in 1914 a bill was drafted and became a State Law regulating the sanitary condition of all soft drink factories.

Inspection Under New Law. During this year the State Board of Health in conjunction with this Department started to enforce this law. Of the thirty-three establishments inspected, two were compelled to permanently cease manufacturing non alcoholic beverages and several were compelled to stop temporarily. Every place visited, some improvements were recommended.

Analysis of Soft Drinks. There were twenty nine samples of soft drinks taken by this Department and seven of these were found to contain saccharin. Law suits are now pending against six of the offenders. The State, in company with this Department, took nine samples and found three to contain saccharin. In four places inspected, $3\frac{1}{2}$ cases and 3,005 bottles of soft drinks were destroyed.

It is a generally held opinion that there is not a food and drug law on the statute books which has produced such good results in so short a time.

Miscellaneous Inspections and Condemnations—During the year a number of eggs of the rots and spots variety were seized and condemned by inspectors from this Department. These foul-smelling eggs were to be used in pastry,

Licking of white bread and the glazing of rye bread. This seems to be, unfortunately, quite a common practice in the city, as we have had occasion to catch the same parties offending several different times. Several law suits against these offenders are now pending.

Stands and Push-carts.—There has, also, been quite an improvement where we have warned persons selling soft drinks on stands and push-carts to provide proper means for washing glasses in running water instead of rinsing the same in a vessel of dirty water.

RESTAURANT KITCHENS.

In November of this year the Department commenced an investigation of the condition of the restaurant kitchens in this city, and after visiting thirty nine it was found that the majority were in a most deplorable condition, with only a few clean and up to date. For the purpose of standardizing requirements the Department adopted a score card, which is now in use, and which has also been adopted by some of our nearby cities.

Score Card and Certificate of Approval.—A restaurant rating 70% or more is eligible to obtain, at a cost of \$5.00, a certificate of approval, which certifies to the sanitary condition of the equipment and methods employed in the place named on the certificate. This certificate is void if upon reinspection the Department finds the restaurant to be below the standard required by this Board. Twenty two of these certificates were issued during 1915, and three restaurants scored perfect marks according to the score card adopted by this Board. A realization of the improved sanitary condition of restaurant kitchens affected by this work cannot be appreciated, except by those familiar with the former conditions prevailing in these restaurant kitchens or by those who have had occasion to visit them.

**DETAILED REPORT OF THE FOOD AND DRUG
DIVISION FOR 1915**

Number of chemical samples taken	815
Number of preliminary samples taken.....	569
Number of sediment tests taken	183
Number of bacteria samples taken (routine).....	2,251
Total number of samples taken for streptococci and various other conditions in mils	111
Number of complaints investigated	61
Number of complaints verified	103
Number of complaints, no cause	58
Number of complaints pending	2
Number of dairies scored	1,783
Number of creameries scored	67
Dairies re-inspected	151

This department started inspection of dairies at Papakating, N. J., on June 2, 1915.
 Total cost of dairy inspection \$1,472.51

Dairy farthest away from this city is Yale, N. Y., which is located 300 miles away from Newark, N. J.

Amount of money collected for milk penalties	\$1,145.00
Fines collected during	\$ 1.00
Fines remitted	\$ 19.00
Number of restaurants scored	6
Number of restaurants re-inspected	26
Amount collected for restaurant scores	\$ 1,000.00
Number of soda-water factories taken	19
Number of milk samples below the standard	2
Number of butter samples taken	1
Number of miscellaneous taken	6
Number of bakeries inspected	12
Number of soda-water factories inspected with State Inspector	11
Number of soda-water factories re-inspected	12



A Nearby Dairy Before Inspection



The Above Dairy as Improved by Recommendation of our Inspectors

Number of cases turned into Legal Department for suit .	22
Number of notices served for supplying running water at soda fountains,	7
Number of milk bottling plants inspected	64
Number of food exposure violations (pretzels)	95
Inspection for food exposures,	132
Number of persons who appeared before the Food and Drug Committee to answer charges of various violations of our Food and Drug Laws.....	198

Respectfully submitted,

SAMUEL G. SHARWELL,

Chief Inspector.

REPORT OF THE MEAT INSPECTOR FOR THE YEAR 1915

The following number of carcases were inspected:

Beef	1,134
Lamb and sheep	87,67
Calves	10,707
Hogs	11,87
Total	109,48

Centre Market and the commission houses on Commerce and Mulberry Streets were inspected daily. The beef houses and butcher shops were also inspected regularly. Was detailed sixteen days inspecting restaurants with the Food and Drug Inspectors.

Three storekeepers were turned in for suit, having poultry exposed for sale.

Respectfully submitted,

DANIEL KUHN,

Meat Inspector.

REPORT OF VETERINARIAN—1915

During the year regular visits to the different slaughter houses were made and a number of complaints of cases of communicable disease in animals were reported and investigated.

There are at the present time eight slaughter houses in the City of Newark, three of which have government inspection.

The following is a summary of the work performed by the Veterinarian during the year:

Cattle inspected..	11,853
Calves inspected ..	12,87
Sheep inspected	115
Hogs inspected	291
Carcasses of beef condemned	18
Carcasses of calves condemned	10
Carcasses of sheep condemned	3
Carcasses of hogs condemned...	10

The results of the investigations of the reported cases of communicable diseases were as follows.

Rabies in a horse, 1 case
Glanders in horses, 15 cases

In every case the animals were killed and the stables, harness and other utensils, and the blacksmith shops where these animals had been shod were thoroughly cleansed and disinfected under the direction of Inspectors Keating and Conrad.

Respectfully submitted,

WERNER RUNGE,

Veterinarian

ANNUAL REPORT
OF THE
Division of Bacteriology
FOR THE YEAR 1915

REPORT OF THE DIVISION OF BACTERIOLOGY 1915

Charles L. Craster, M. D., D. P. H., Health Officer.

DEAR SIR —Herewith is respectfully submitted the report of the Division of Bacteriology for the year ending December 31, 1915.

DIPHTHERIA AND TYPHOID FEVER DECREASING.

The year has been marked by a comparatively low incidence of Diphtheria and Typhoid Fever in Newark, the two diseases for which the laboratory is most frequently called upon by physicians for aid in the early diagnosis.

TUBERCULOSIS SPECIMENS INCREASE.

There was a decided increase in the specimens examined for Tuberculosis, the number being nearly a thousand more than the previous year.

THE CITY WATER

The routine examinations of the City Water made at frequent intervals during the year show that the Pequannock supply maintained a remarkably high degree of bacterial purity. This was reflected in the absence of intestinal disorders in Newark.

FREEDOM FROM RABIES

This city has been practically free from rabies during the year, only one dog and one horse were found infected with the disease throughout the whole year, although the brains of 25 dogs, 3 cats, 1 horse and 1 calf were examined. However, attacks of vicious dogs on human beings constantly occur, necessitating careful investigation of every case reported.

INCREASED MILK EXAMINATIONS

Perhaps the most important step taken by the Board during the year, so far as the Bacteriological Laboratory is concerned, was the provision for a more extensive examination of the milk supply. More help has been provided and new equipment furnished, especially for this work. The results thus far show that almost 200% more samples of milk were examined this year than last.

The following table gives a summary of the routine work for 1915:

BACTERIOLOGICAL LABORATORY RECORD FOR 1915

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Actual
Diphtheria													
Positive cultures examined	724	749	839	78	580	131	531	11	41	573	548	788	7,188
True cases	120	92	14	50	31	26	74	35	30	66	72	88	632
Total number of cultures examined	925	926	1,15	811	690	764	593	500	370	676	662	1,13	8,623
Diphtheria Antitoxin—													
On hand January 1, 1915	657												
Number of doses produced	160	321	121	181	178	0	288	0	0	409	287	749	1,964
Number of doses distributed	378	521	149	212	203	145	145	1,1	195	329	388	404	1,402
Tuberculosis —													
Specimens of sputa examined	270	216	261	251	140	216	251	342	346	346	288	380	5,336
Specimens containing tubercle bacilli	71	52	66	56	56	63	14	91	1	114	63	129	1,284
Blood examinations (typhoid & malaria)													
Specific catarrhal infections examinations	13	43	72	71	61	67	130	12	101	94	72	56	948
Milk examinations	59	62	91	63	64	45	61	98	76	65	81	97	846
Water examinations	82	67	103	14	89	95	110	27	311	11	29	27	2,39
Disinfection tests	17	11	23	28	28	21	22	24	25	24	11	21	261
	130	108	148	123	111	63	96	78	43	58	80	117	1,065



Fig. 5 Syringe with Diphtheria Antitoxin at City Hospital.

DIPHTHERIA ANTITOXIN

During 1915 there were 1,107 cases of diphtheria reported in Newark, and of this number 1,082 cases were treated with diphtheria antitoxin. There were 192 of the above cases removed to and treated at the Essex County Isolation Hospital at Soho, where 29 died, a mortality for the institution in Newark cases of 15.10%, while 893 cases were treated in Newark with Board of Health antitoxin of which 19 died, a mortality of 2.12%. This makes the total mortality of antitoxin treated cases for Newark 4.42%.

The records for the year show that no antitoxin was used in 22 cases of diphtheria, 4 of which died, a mortality of 18.10%.

The following table is self explanatory:

DIPHTHERIA

	Antitoxin Used				Antitoxin Not Used		
Period	Cases	Deaths	Per Cent	Period	Cases	Deaths	Per Cent
1895 to 1900	3,296	357	10.8	1895 to 1900	2,441	528	21.6
1900 to 1905	5,070	365	7.2	1900 to 1905	1,289	256	19.8
1905 to 1910	5,348	323	6.0	1905 to 1910	622	144	23.0
Year				Year			
1900	1,252	80	6.3	1910	133	24	18.0
1901	1,244	56	4.5	1911	92	18	19.5
1902	1,165	76	7.5	1912	93	15	16.1
1903	1,183	89	5.97	1913	105	21	20.0
1904	1,411	78	5.5	1914	82	11	13.4
1905	1,855	48	4.42	1915	22	4	18.1

The following report upon specimens sent in for the diagnosis of Tuberculosis during 1915 is submitted by Dr. Ripley, First Assistant Bacteriologist

TUBERCULOSIS

DEAR SIR—The number of examinations of sputa made at the laboratory from suspected cases of tuberculosis for the year 1915 was 3,396, this being the largest number since the laboratory was established.

Tubercle Bacilli were found in 980 samples, or 29%, and 2,416 were negative. The percentage of positive cases found, however remained practically the same, as the following table for the past ten years will show.

YEAR	Positive	Negative	Total	Percentage of Positive Cases					
				1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
1906	730	1,287	2,125	34					
1907	761	1,415	2,176	34					
1908	722	1,286	2,107	34					
1909	878	1,627	2,521	34					
1910	771	1,417	2,517	30					
1911	680	1,611	2,335	29					
1912	674	1,820	2,617	30					
1913	684	1,936	2,620	27					
1914	677	1,747	2,414	28					
1915	698	2,341	3,096	29					

The physicians for whom the examinations were made furnished data regarding the sex and age in 641 cases in which Tubercle Bacilli were found. Four hundred and eighteen, or over 65% of these were males and 223, or over 34%, were females.

The following table for the last ten years shows the sex and time of life in which tuberculosis occurred.

YEAR	1 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 plus		Total	
	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
1897	26	29	110	15	6	56	7	17	33	5	8	2	327			
1898	2	25	21	16	71	12	11	20	25	5	6	4	62			
1899	1	40	20	8	7	17	1	28	21	11	5	5	569			
1900	1	28	33	15	4	13	1	1	35	8	18	7	36			
1901	35	22	135	13	7	40	38	23	22	12	5	1	47			
1902	7	29	13	18	7	5	6	14	25	8	7	6	46			
1903	1	30	34	17	12	27	6	18	51	4	16	5	714			
1904	25	26	131	16	8	28	4	7	50	6	18	6	653			
1905	23	28	149	76	9	26	9	22	1	6	3	3	556			
1906	9	3	25	34	131	94	60	57	3	52	11	21	3	641		
Totals	2	1	306	259	94	714	1107	595	747	921	262	81	104	66	631	
Per Cent	0.2	0.5	33.0	30.0	30.0	16.0	7.8	—	—	—	—	—	—	—		

The records of the year show that 86 victims had cases of tuberculosis in the immediate family.

Respectfully submitted,

DR. THOMAS H. RIPLEY,

Assistant Bacteriologist

BACTERIAL VACCINES

Typhoid Vaccine and Whooping Cough Vaccine are prepared at the laboratory for free distribution in Newark, and upwards of 300 doses of the former and 45 doses of the latter have been used during the year.

This is the first year that Whooping Cough or Pertussis Vaccine has been prepared by our board, and regarding the process of manufacture the following description has been prepared by Dr H A Tarbell, Second Assistant Bacteriologist.

To R. Connally, M.D., Bacteriologist

DEAR SIR In September of this year the laboratory began the manufacture and distribution of vaccine for immunization and treatment of whooping cough. Vaccine is made by growing the Bordet-Gengou Baccillas on blood agar slants, emulsifying with salt solution and killed at 56° C by immersion in the water bath. Dilutions of this emulsion are made with normal salt solution containing 1-3 of 1% tricresol, the product being finally bottled in individual containers of 1 C.C. each.

The vaccine is put up in doses of 250 million, 500 million and 1,000 million bacteria, the contents of the vial to be injected subcutaneously every third day. A slight local reaction about the site of injection, which disappears in 24 hours, may result though reports from our local physicians have not shown it to be constant. The Board of Health published a circular which was sent to all physicians in the city explaining its use.

The prevalence of the disease in Newark led the Board to think that there would be a greater demand for the product than has been shown by the small number of doses distributed. The vaccine is free to residents of Newark and physicians may procure a supply by applying at the laboratory. Personal observations by physicians who have used the vaccine seem to vary considerably, some being enthusiastic others claiming it has done little good.

Respectfully,

H. A. TARBELL, M.D.

Assistant Bacteriologist

CITY MILK SUPPLY

The following report, giving a detailed description of the methods employed at the laboratory in examining the samples of milk, has been prepared by Dr. G. Ward Disbrow, Third Assistant Bacteriologist:

The milk supply received special attention during the past year and some important results have been obtained which appear to justify the increased expense of this step by the board.

PUS AND STREPTOCOCCI IN MILK FREQUENT

For instance, there have been a number of cases in which pus and streptococci were found in samples of mixed milk, that is to say, the combined product of several cows or even of several dairies. In almost every instance of this kind it has been possible for the investigators of our Board, guided by the microscopic findings of samples of milk from the suspected dairy, to trace the infection to the individual cow and order its removal from the herd. Some animals were so badly infected that it savors of criminal carelessness on the part of the dairymen to serve innocent consumers with the product of such animals and sell it under the name of milk.

CRIMINAL CARELESSNESS IN MILK PRODUCTION

It seems incredible that men would continue to draw milk from some of the cows that have been found by Inspectors of our Board, mix it with milk from healthy animals and sell it to be consumed, probably by innocent children and delicate invalids. Several instances of this kind have been found in which the most superficial examination would satisfy anyone who attempted to milk the animal that the udder was badly diseased, and in these cases the microscope showed the product to be teeming with streptococci or pus producing germs, and the fluid almost entirely composed of pus and blood.

ROUTINE EXAMINATION OF HERDS NECESSARY

These cases illustrate the necessity for a thorough examination of every milk producing animal in the herd, or the absolute pasteurization or even sterilization of all milk unless the individual history of every animal is certified to.

MILK ANALYSIS.

To R. A. Connolly, M. D., Bacteriologist:

DEAR SIR.—During the year commencing January 1st and ending December 31st, 1915, the routine examination of the city milk supply has been continued in much the same manner as in preceding years. In addition, certain other examinations have been made which are consistent with the modern trend of thought along bacteriological lines. For purposes of clearness each sub-division of the work —namely, routine examinations, room temperature counts, examinations for streptococci, for colon bacilli, and for acid fast bacilli will be described as separate entities under appropriate headings.

Routine Examinations.—These have been conducted, as in preceding years, along lines laid down by the Committee on Standard Methods of Bacterial Milk Analysis of the American Public Health Association. Each sample is collected by the Inspector from the dealers' milk supply by means of a sterile pipette. The sample thus collected is placed in a sterile test tube, which is given a serial number, and enclosed in an ice filled container in which it is transported to the laboratory. In this connection I wish to emphasize the fact that the dealer from whom the sample is collected is known only to the Inspector, inasmuch as the samples, as received at the laboratory, bear only the serial number. In addition, the icing of the sample keeps it at a temperature at which the multiplication of bacteria is impossible, thus insuring the fairest possible treatment of the milk dealers.

During the year just ended 2,238 samples have been brought to the laboratory for routine examination; of these 2,144 were examined and reported to the Board of Health. The remaining 94 samples comprise special examinations, samples destroyed in transit, etc., as may be seen from the accompanying table:

ROUTINE EXAMINATIONS	Number of Samples	Per Cent.
Samples containing 50,000 bacteria per C. C. and under	1,167	54.43+
Samples containing over 50,000 up to and including 100,000 per C. C.	267	12.45+
Samples containing over 100,000 up to and including 500,000 per C. C.	383	17.86+
Samples containing over 500,000 up to and including 1,000,000 per C. C.	110	5.13+
Samples containing over 1,000,000 per C. C.	27	1.01+
Total	2,144	99.04+
Special Examinations	72	
Samples destroyed in transit to laboratory	12	
No counts made	10	
Total	2,238	

The City Milk Ordinance adopted December 2, 1913, and amended August 4, 1914, divides the milk supply into five classes, namely: Certified containing 10,000 bacteria and under per C. C. Grade A., raw, containing 100,000 and under to the C. C. Grade A., pasteurized, containing not more than 200,000 before pasteurization, nor 30,000 after pasteurization. Grade B., pasteurized, containing not more than 1,000,000 before pasteurization nor 50,000 after pasteurization. Grade C., which contains more than 1,000,000 bacteria to the C. C., is sold only in bulk and used only for cooking purposes.



By comparison with the foregoing table it may be seen that 66.88 + % of the samples examined during the year come within requirements of the first three groups, or those generally used for drinking purposes. The remaining 33.12 + % may be divided between the other two divisions and those condemned as falling below standard.

ROOM TEMPERATURE COUNTS

Many authorities contend that incubation at 37° C. for two days does not give the total bacteria per C. C. but claim that plates inoculated in the ordinary manner but grown at room temperature for 3 or 4 days, give a more accurate count. Following out this line of thought, in addition to the routine counts just mentioned, room temperature counts have been made throughout the year on 1,902 samples. The results thus obtained are shown in the following table.

NUMBER OF SAMPLES EXAMINED	NUMBER OF SAMPLES	PER CENT.
Samples containing 50,000 bacteria and under	621	31.17+
Samples containing over 50,000 up to and including 100,000 per C. C.	146	7.32+
Samples containing over 100,000 up to and including 500,000 per C. C.	542	26.29
Samples containing over 500,000 up to and including 1,000,000 per C. C.	188	9
Samples containing over 1,000,000 per C. C.	495	21.84
Total	1,992	99.96+

These figures are not required by the Board of Health and are not reported as routine, and the grading of the milk supply is in no way connected with them.

EXAMINATIONS FOR STREPTOCOCCI.

During the year, 2,183 examinations have been made to determine the presence of streptococci. Inasmuch as this organism is responsible for outbreaks, in epidemic form, of septic sore throat, the determination of its presence is important in order that cows suffering with mastitis (from which the streptococcus is derived) may be isolated and their milk kept from the general supply.

The following table gives the result of these examinations:

EXAMINATIONS FOR STREPTOCOCCI	NUMBER OF SAMPLES	PER CENT.
Routine samples examined	2,183	
Streptococci found	8	366+
Special examination for isolation of suspected cows	106	
Streptococci found and cows isolated as result of examination	18	

It will be noted that of the 2,183 samples examined only 8, or .366 + %, contained streptococci. This is an exceptionally low figure and speaks highly of the efficiency of the Corps of Inspectors, as well as the excellent co-operation of the milk dealers in the effort to keep the city milk supply as pure as possible.

EXAMINATIONS FOR COLON BACILLI

For a time it was thought possible that by means of a special media (Endo's) the presence of Colon Bacilli in the milk supply might be ascertained. To carry out this idea 260 samples were examined of which 162, or 62.30 + % were found to contain this organism. An attempt was made to determine the number of Colon Bacilli per C. C.

After some experimentation it was found that other organisms, especially certain of the lactic acid group, produced results similar to the Colon Bacilli, and that differentiation by this reason became extremely difficult, if not impossible.

The idea of making counts by this method was therefore abandoned, but the table below, showing the presence or absence of the organism and agreeing with the results obtained in other cities, I believe to be fairly correct:

ROOM TEMPERATURE EXAMINATIONS	Number of Samples	Per Cent.
Number of examinations	260	
Colon bacilli present	162	62.30 +
Colon bacilli absent	98	" " "

It is to be remembered that these figures are not intended to show the Colon Bacillus content of the City milk supply. They merely show the number of samples examined in

which the Colon Bacillus was present, and are incorporated in this report merely to show what work was done along this line during the year.

EXAMINATIONS FOR ACID FAST BACILLI.

Toward the close of the year, following out the suggestion of the Health Officer, attempts were made to determine the presence of the acid fast organisms with the ultimate view of establishing the presence or absence of Tercle Bacilli in the milk used for drinking purposes. Owing to the shortness of time before this report was handed in, our figures are inconclusive, and as the investigations will be continued during the ensuing year, it is thought best merely to mention in what part of the samples tested acid fast organisms were found.

This result is tabulated below:

	Number of Samples	Per Cent
EXAMINATIONS FOR ACID FAST BACILLI		—
Number of examinations for acid-fast bacilli	40	
Found present	25	62.50
Found absent	15	37.50
Positive acid-fast organisms tested for tubercle bacilli	10	
Found to be tubercle bacilli	0	—

I wish to emphasize the fact that this part of the work is not conclusive. In a few cases (10) the work has been finished and the organisms found proved non tuberculous. In other cases the work could not be finished in time for this report. These results will be given at a later date.



Waiting Room at the City Disp.

SUMMARY

Routine examinations - 57 ^o counts	2,111
Room temperature counts	112
Examinations for streptococci	2,83
Special examinations for streptococci	106
Examinations for colen bacilli	260
Examinations for acid-fast organisms	40

Very respectfully submitted,

G. WARD DISBROW, M. D.,

Third Assistant Bacteriologist

THE CITY WATER

The usual bi-weekly series of samples of Pequannock water were obtained throughout the year excepting only such times as severe weather conditions made it impracticable to take samples from the sampling points on the watershed.

The bacteriological examination consists of making from each sample of the water two sets of plain agar plates; one set is incubated at $37\frac{1}{2}^{\circ}$ C. and the other grown at room temperature. Two series of fermentation tubes are inoculated with varying amounts of the sample; one set of tubes contains glucose bouillon and the other lactose bile. Thus from each sample of the water 16 inoculations are made, 4 plates and 12 fermenting tubes.

In recording results the room temperature grown agar counts are given and the fermentation is only given when both glucose and lactose bile show the presence of gas producing organisms, giving at least 25% of gas, of which at least 25% is CO₂. Sub cultures on Endo's medium are made from the fermenting tubes from time to time for confirmation of the presence of Colon Bacilli.

The results of the tests are given in the following table:

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915.

Samples from Oak Ridge Stream, above Clinton Stream

1915	Bact. Per C.C.	Amount of Sample Causing Fermentation, u					
		Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	3
		2	10	3	2	C.C.	C.C.
June 27	9	—	—	—	—	+	+
July 1	52	—	—	—	—	—	—
July 10	5	—	—	—	—	—	—
July 11	28	—	—	—	—	—	+
July 13	8	—	—	—	—	+	+
April 8	5	—	—	—	—	+	+
May 12	8	—	—	—	—	—	—
May 2	8	+	+	+	+	+	+
June 9	58	+	+	+	+	+	+
June 25	8	+	+	+	+	+	+
July 15	76	—	—	—	—	+	+
July 29	150	—	—	—	—	+	+
Aug 11	150	—	—	—	—	+	+
Aug 23	90	—	—	—	—	+	+
Sept 9	24	—	+	+	+	—	+
Sept 11	12	—	—	—	—	—	—
Oct 19	950	+	+	+	+	+	+
Oct 28	1500	+	+	+	+	+	+
Nov 1	40	—	—	—	—	—	+
Nov 27	120	—	—	—	—	—	+
Dec 1	50	—	—	—	—	—	—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915—Continued

Samples from Clinton Stream, above Oak Ridge Stream.

1915	Baet. Per C.C.	Amount of Sample Causing Fermentation in							
		Glucose Bouillon and Laetose Bile							
		1	1	1	1	1	1	5	
		20	10	5	2	C.C.	C.C.		
Jan 2	45	—	—	—	—	—	—	+	—
Feb 2	170	—	—	—	—	—	—	—	—
Mar 1	40	—	—	—	—	—	—	—	—
Mar 2	50	—	—	—	—	—	—	—	—
Apr 11	130	—	—	—	—	—	—	+	—
Apr 28	120	—	—	—	—	—	—	+	+
May 12	75	—	—	—	—	—	—	+	+
May 27	45	—	—	—	—	—	—	—	+
June 9	740	—	—	—	—	—	—	—	—
June 23	1,180	—	+	+	+	+	+	+	+
July 15	1,150	—	—	—	+	+	+	+	+
July 28	360	+	+	+	+	+	+	+	+
Aug 11	1,830	—	—	—	+	+	+	+	+
Aug 25	1,550	+	+	+	+	+	+	+	+
Sept 9	1,140	—	—	—	—	+	+	+	+
Sept 21	680	—	+	+	+	+	+	+	+
Oct 19	990	—	—	—	—	—	+	+	+
Oct 28	1300	—	—	—	—	—	+	+	+
Nov 17	120	—	—	—	—	—	+	+	+
Nov 30	80	—	—	—	—	—	—	+	—
Dec 16	50	—	—	—	—	—	—	—	—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915 - Continued

Samples from Kanouse Creek above Pequannock River

Date	Bact Per C.C.	Amount of Sample Causing Fermentation in					
		Glucose Bouillon and Lacto-			Bile		
		1	1	1	2	3	4
Jan. 26	0	-	-	-	-	-	-
Feb. 26	+	-	-	-	-	-	-
Mar. 10	+	-	-	-	-	-	-
Mar. 21	+	-	-	-	-	-	-
Apr. 1	+	-	-	-	-	-	-
Apr. 28	+	-	-	-	-	-	-
May 12	+	-	-	-	-	-	-
May 27	17	+	+	+	+	+	+
June 3	17	-	+	+	+	+	+
June 10	17	-	+	+	+	+	+
July 7	500	-	+	+	+	+	+
July 28	1,000	-	+	+	+	+	+
Aug. 11	+	-	+	+	+	+	+
Aug. 22	1,000	-	+	+	+	+	+
Sept. 1	100	-	-	+	+	+	+
Sept. 21	8	-	+	+	+	+	+
Oct. 19	-	-	-	-	-	-	-
Oct. 28	17	-	-	-	-	-	-
Nov. 17	17	-	-	-	-	-	-
Nov. 27	17	-	-	-	-	-	-
Dec.	0	-	-	-	-	-	-

The sign (-) means no fermentation produced

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915. Continued.

Samples from Echo Lake Stream, above Pequannock River.

1915	Baet. Per C. C.	Amount of Sample Causing Fermentation on n.					C. C.	C. C.		
		Glucose Bouillon and Lactose Bile								
		1	1	1	1	5				
		20	50	100	200	500				
Jan 1	150									
Feb 14	50									
Mar 1	80									
Mar 21	200									
Apr 4	200									
Apr 28	130									
May 12	280									
May 26	100									
June 9	200	+	+							
June 23	300									
July 15	1,200									
July 28	600									
Aug 11	350	+	+	+	+					
Aug 25	2,000	+	+	+	+					
Sept 9	1,600									
Sept 21	1,300	+	+	+	+					
Oct 19	200									
Oct 28	1,550									
Nov 1	21									
Nov 20	321									
Dec 1	380									

The sign (+) means no fermentation produced

The sign (++) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915—Continued

Samples from Macopin Intake, at Gatehouse.

Mo.	Baet. P.	Amount of Sample Causing Fermentation in						
		Glucose Bouillon and Lactose Bile						
		C	C	C	C	C	C	C
		2	1	1	2	1	1	1
Jan. 27	70	—	—	—	—	—	—	+
Feb. 2	70	—	—	—	—	—	—	—
Mar.	70	—	—	—	—	—	—	—
Mar. 21	70	—	—	—	—	—	—	—
Apr. 11	70	—	—	—	—	—	—	—
Apr. 28	70	—	—	—	—	—	—	—
May 12	70	—	—	—	—	—	—	—
May 2	60	—	—	—	—	—	—	—
June 1	8	—	—	—	—	—	—	—
June 3	7	—	—	—	—	—	—	—
July 15	1	—	—	—	—	—	—	—
July 28	70	—	—	—	—	—	—	—
Aug. 11	60	—	—	—	—	—	—	—
Aug. 17	60	—	—	—	—	—	—	—
Sept.	125	—	—	—	—	—	—	—
Sept. 21	125	—	—	—	—	—	—	—
Oct. 10	140	—	—	—	—	—	—	—
Oct. 28	10	—	—	—	—	—	—	—
Nov. 17	10	—	—	—	—	—	—	—
Nov. 3	10	—	—	—	—	—	—	—
Dec. 1	90	—	—	—	—	—	—	—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915—Continued.

Samples from Cedar Grove Reservoir, at Inlet Gatehouse.

1915	Bact. Per C.C.	Amount of Sample Causing Fermentation in					
		Glucose Bouillon and Lactose Bile			5		
		1 20	1 10	1 5	1 2	1 C.C.	1 C.C.
Jul 14	560	—	—	—	—	—	—
Jan 27	180	—	—	—	—	—	—
Feb 14	210	—	—	—	—	—	—
Mar 10	0	—	—	—	—	—	—
Mar 24	280	—	—	—	—	—	—
Apr 14	100	—	—	—	—	—	+
Apr 28	120	—	—	—	—	—	+
May 12	180	—	—	—	—	—	—
May 26	50	—	—	—	—	—	+
June 9	240	—	—	—	—	—	—
June 23	80	—	—	—	—	+	+
July 15	100	—	—	—	—	+	+
July 28	22	—	—	—	—	—	+
Aug 11	260	—	—	—	—	—	+
Aug 25	140	—	—	—	+	—	+
Sept 9	290	—	—	—	—	—	+
Sept 21	270	—	—	—	—	—	+
Oct 19	190	—	—	—	—	—	—
Oct 28	230	—	—	—	—	—	+
Nov 17	60	—	—	—	—	—	—
Nov 30	70	—	—	—	—	—	—
Dec 10	100	—	—	—	—	—	—

The sign (—) means no fermentation produced

The sign (+) means fermentation produced

**BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915- Continued**

Samples from Cedar Grove Reservoir, at Outlet Gatehouse

1915	Bact Per C.C.	Amount of Sample Causing Fermenta- tion in				
		Glucose Bouillon and Lactose Bile				
		—	—	—	—	—
Jan. 11	+					
Jan. 12	10					
Feb. 12	12					
Mar. 10	25					
Mar. 21	+					
Apr. 11	1					
Apr. 28	+	—			—	+
May 1	+					
May 10	10	—			—	
June 10	—	—			—	—
July 12	8	—		—	+	+
July 17	9	—		—	—	+
July 28	20	—	—	—	—	+
Aug. 11	+	—	+	+	+	+
Aug. 22	—	—	—	—	—	+
Sept. 5	18	—	—	—	—	—
Sept. 20	17	—	—	—	+	+
Oct. 1	16	—	—	—	—	+
Oct. 28	10					
Nov. 11	8					
Nov. 30	110	—	—	—	—	—
Dec. 10	34	—	—	—	—	—

The sign (—) means no fermentation produced

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915—Continued

Samples from Belleville Reservoir, at Inlet Gatehouse

1915	Baet. Per C C	Amount of Sample Causing Fermentation in Glucose Bouillon and Lactose Broth				
		1		1		5
		C	C	C	C	C
Feb. 1	10					
Feb. 21	6					
Feb. 23	2					
Mar. 10	8					
Mar. 21	25					
Apr. 11	160					
Apr. 28	160					
May 1	80					
May 25	11					
June 1	160					
June 28	100					
July 1	80					
July 28	160					
Aug. 1	8		+	+		+
Aug. 2	8		+			+
Sept. 9	30					
Sept. 24	160					
Oct. 1*	50					
Oct. 8	140					
Nov. 17	6					
Nov. 24	100					
Dec. 1	18					

The sign (-) means no fermentation produced

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK

WATER DURING 1915—Continued.

Samples from Belleville Reservoir, at Outlet Gatehouse.

1915	Date	P.H. C.C.	Amount of Sample Causing Fermentation in					
			Glucose Bouillon and Lactose Bile					
			1	1	1	1	1	5
			2	10	0	2	C.C.	C.C.
Jan. 6		24	—					
Jan. 27		20						
Feb. 21		18						
Mar. 1		+						
Mar. 21		14						
April 13		28						
Apr. 28		50						
May 12		50						
May 2		11					+	+
June 1		13						
June 23		7						+
July 15		5						—
July 28		1.0						+
Aug. 1		110		+	+	+		+
Aug. 5		6					+	—
Sept. 9		6						—
Sept. 25		10						+
Oct. 9		0						+
Oct. 28		0						—
Nov. 17		11						—
Nov. 30		6						—
Dec. 1		28						—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915—Continued.

Samples from Board of Health Office, Plain and William Sts.

1915	Baet. Per C. C.	Amount of Sample Causing Fermentation in					
		Glucose Bouillon and Lactose Bile					
		1 20	1 10	1 5	1 2	1 C. C.	5 C. C.
Jan. 11	170					+	
Jan. 27	11						
Feb. 21	80						
Mar. 21	140						
Mar. 31	60						
Apr. 10	110						
Apr. 28	70						
May 12	40						
May 26	140						
June 6	50						
June 13	40					+	
July 15	50						
July 28	60						
Aug. 11	8				+	+	
Aug. 15	4					+	
Sept. 9	40						
Sept. 21	22					+	
Oct. 19	?					+	
Oct. 28	?					+	
Nov. 30	?					+	
Nov. 17 ...	?					+	
Dec. 10 ...	6					+	

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK
WATER DURING 1915—Continued

Samples from Laboratory Faunet, City Hospital

1915	Bact Per C.C.	Amount of Sample Causing Fermentation in				
		Glucose Bouillon and Lactose Bile				
		1	1	1	1	1
Jan 11	-	-	-	-	-	-
Feb 7	-	-	-	-	-	-
Feb 14	-	-	-	-	-	-
Mar 1	-	-	-	-	-	-
Mar 8	-	-	-	-	-	-
Mar 15	11	-	-	-	-	-
Mar 22	-	-	-	-	-	-
Mar 29	-	-	-	-	-	-
Apr 5	-	-	-	-	-	-
Apr 12	-	-	-	-	-	-
Apr 19	-	-	-	-	-	-
May	-	-	-	-	-	-
May 6	-	-	-	-	-	-
May 13	22	-	-	-	-	-
May 20	26	-	-	-	-	-
June 3	-	-	-	-	-	-
June 10	180	-	-	-	-	-
July 15	15	-	-	-	-	-
July 22	8	-	-	-	-	-
Aug 5	11	-	-	-	-	-
Aug 12	27	-	-	-	-	-
Sept 1	-	-	-	-	-	-
Sept 8	-	-	-	-	-	-
Sept 15	-	-	-	-	-	-
Sept 22	-	-	-	-	-	-
Sept 29	-	-	-	-	-	-
Oct 6	-	-	-	-	-	-
Oct 13	28	-	-	-	-	-
Oct 20	17	-	-	-	-	-
Nov	-	-	-	-	-	-
Dec 4	-	-	-	-	-	-

The sign (-) means no fermentation produced

The sign (+) means fermentation produced

AVERAGE NUMBER OF BACTERIA PER CUBIC CENTIMETER IN THE PEQUANNOCK WATER AT
THE SAMPLING POINTS FOR SIX YEARS.

ORIGIN OF SAMPLES	1910			1911			1912			1913			1914			1915		
	No. of Samples	Average No. of Bacteria Per C.C. Samples	Average Number of Bacteria Per C.C.	No. of Samples	Average No. of Bacteria Per C.C. Samples	Average Number of Bacteria Per C.C.	No. of Samples	Average No. of Bacteria Per C.C. Samples	Average Number of Bacteria Per C.C.	No. of Samples	Average No. of Bacteria Per C.C. Samples	Average Number of Bacteria Per C.C.	No. of Samples	Average No. of Bacteria Per C.C. Samples	Average Number of Bacteria Per C.C.	No. of Samples	Average No. of Bacteria Per C.C. Samples	Average Number of Bacteria Per C.C.
Oak Ridge Stream, above Clinton Stream	22	1611	21	1452	22	18.9	23	111	19	1411	21	852						
Clinton Stream, above Oak Ridge Stream	22	1475	21	1470	22	779	23	877	19	1329	21	750						
Kanouse Creek, above Pequannock River	22	1761	21	1,006	22	1,261	23	1,428	19	1,139	21	613						
Echo Lake Stream, above Pequannock River	22	2,236	21	1,117	22	1,016	23	746	19	1,411	21	1,93						
Macopin Intake, at Gatehouse	22	690	21	1,252	22	655	23	733	19	570	21	511						
Cedar Grove Reservoir, at Inlet Gatehouse	23	304	22	110	11	13	23	292	20	236	22	135						
Cedar Grove Reservoir, at Outlet Gatehouse	21	266	22	28	2	287	23	208	19	215	22	158						
Belleville Reservoir, at Outlet Gatehouse	25	190	22	255	20	275	23	192	22	24	22	136						
Cedar Grove Reservoir, at Inlet Gatehouse	25	216	22	214	20	267	23	172	22	24	22	18						
Board of Health Office, Piane and William Sts.	27	99	22	172	32	188	25	99	25	12	22	66						
Laboratory Faucet, City Hospital	—	—	—	28	106	22	118	67	152	30	95	41	110	26	99			

Respectfully Submitted,

RICHARD N. CONNOLLY, M. D.,

Bacteriologist.

**REPORT OF THE
SEROLOGICAL LABORATORY
AT THE
CITY HOSPITAL**

Serological Laboratory

AT THE CITY HOSPITAL

Charles V. Craster, M. D., D. P. H., Health Officer:

I herewith submit the report of the Serological Laboratory for the year 1915:

ORGANIZATION.

In May, 1913, the Board of Health decided to combine the facilities of the Bacteriological and Pathological Laboratories at the City Hospital in order to perform the Wassermann Reaction for the Serological Diagnosis of Syphilis.

The Serological Laboratory was organized to perform the Wassermann Reaction and to examine free of charge for the Treponema Pallidum (germ of syphilis) from patients residing in the City of Newark.

The tests are made once a week at the laboratory. Physicians may collect the blood specimens personally, using the outfit supplied by the Department, or they may send the patients direct to the laboratory for this purpose. Outfits for samples of blood required in the tests, with a history blank containing directions can be obtained at any of the culture stations established by the Board of Health or at the laboratory.

RECORD OF WASSERMANN TESTS

The laboratory has at the present time compiled over 6,000 reports of Wassermann tests, about one-third of this number being from the medical and surgical wards of the City Hospital. These reports are filed, bound in volumes and card indexed.

ROUTINE WASSERMANN TESTS FOR HOSPITAL PATIENTS.

In my report for the year 1914, attention was called to the fact that it was fast becoming a diagnostic necessity in the City Hospital to have routine Wassermann reactions carried out on patients staying in the institution for a longer period than one week. This will greatly increase the work, and necessitate the performance of the tests on three or more days a week, instead of once a week as is being done at the present time. Furthermore the Wassermann reaction is intimately connected with clinical pathology in general and with other special serological procedures, such as for chronic organic lesions of the central nervous system, requiring for their proper diagnosis a complete examination of the spinal fluid as to globulin content, pleocytosis, complement fixation and colloidal gold tests (a procedure just as important as the examination of the urine in a diabetic case) that the work becomes a very important part of the pathological work for patients in the City Hospital. It therefore should always be a part of the duties of the pathological laboratory of the City Hospital, and at the same time it is earnestly hoped that in the future organization of the laboratories with the increased equipment, the tedious and monotonous part of the technique can be done by trained technicians.

FUTURE ACTIVITIES.

With the erection of the new laboratory building it is hoped that the work may be increased by the performance of complement fixation tests for the diagnosis of gonorrhoea, tuberculosis, pertussis, glanders and certain streptococcal infections, and that there will be a stimulus for the study of certain problems in infection and immunity.

REPORT FOR YEAR 1915.

The following table will show approximately the work done by the laboratory during the year 1915:

WASSERMANN TESTS FOR THE YEAR 1915

TABLE No. 1

MONTH	Number of			City			Other Sources
	Wassermann Reactions	Positive	Negative	City Hospital	Dispens- ary		
January	209	6	110	11	29	119	
February	242	64	178	65	22	155	
March	356	82	274	109	28	219	
April	369	67	302	81	17	271	
May	350	64	286	131	31	188	
June	321	66	255	136	21	164	
July	263	31	232	69	13	181	
August	261	39	222	76	16	169	
September	318	63	255	74	27	217	
October	268	66	202	69	18	181	
November	344	105	239	107	32	205	
December	387	92	295	138	39	210	
Total	3 688	808	2 880	1 291	281	—	

TABLE No. 2

Total number of Wassermann reactions since laboratory started:

1911 - 8 months or less	1,061
1912	2,322
1913	3,688
Total for 3 years.....	7,071

WORK DONE FOR HOSPITALS AND PHYSICIANS

During the year 1915, 307 physicians in Newark have sent blood specimens or patients to the laboratory for examination.

The following institutions have used the laboratory for the performance of the Wassermann reaction: City Hospital, City Dispensary, St. Michael's Hospital, St. James' Hospital, St. Barnabas' Hospital, German Hospital, Newark Eye and Ear Infirmary, Beth Israel Hospital, Homeopathic Hospital, Home for Crippled Children, Women's and Children's Hospital, Babies' Hospital, Soho Isolation Hospital, Florence Crittenden Home, and Departments of Education and Child Hygiene.

EARLY DIAGNOSIS OF SYPHILIS IMPORTANT

Numerous examinations for treponema pallidum have been made from initial lesions, positive early diagnosis often made, and the patient started under proper and early treatment. This is of great importance, as vigorous treatment started before the stage of generalization is practically the only chance a syphilitic has of being cured of the disease. By judicious argument many cases of active syphilis, especially in young adults, have been directed to physicians and institutions where they can receive proper treatment and be kept from mixing in society until they have passed their active communicable stage of syphilis.

H. S. MARLAND, M. D.

ANNUAL
REPORT OF THE CHEMIST
NEWARK BOARD OF HEALTH

ANNUAL REPORT OF THE CHEMIST

Dr. Chas. V. Craster, Health Officer, Newark, N. J.

DEAR SIR—I herewith submit my annual report for the year ending December 31, 1915

The milk work continues to be of prime importance, but the classified tables of analyses which for the past eighteen years have featured in my annual reports have been discontinued, as the increasing number of samples makes them too voluminous. The retention of tables of analyses of city water seems desirable, however, as inquiries for these are continually received from both citizens and non-residents.

A condensed summary of the analytical work and the tables of city water examinations follow:

MILK

Sealed samples analyzed.....	810
Unsealed samples analyzed.....	509
Sediment tests made	183
Samples below State standard of 11.50% total solids	129
Average composition of—	TOTAL SOLIDS. FAT.
Samples above standard.	12.43% 3.62%
Samples below standard.....	10.94% 2.85%
All samples	12.29% 3.55%

Although the general average quality of the milk is indicated by the figures to be slightly less than last year, it is in reality improved, as the much larger proportion of

milk below standard this year are included in the averages. This greater proportion of below standard samples was probably due to a more thorough knowledge of conditions by the inspectors and more careful selection of samples. It has also resulted in a much larger collection of penalties.

The milk sold in Newark is now graded according to the requirements of the new Milk Ordinance. This system is being largely adopted throughout the country, and while it is realized that the best way would be to have all milk of the highest grade, conditions will not admit of such a radical change for the entire milk supply at once and it is hoped that the grades are only a means towards an end.

The increasing knowledge and more general use of the homogenizer in the milk industry may bring us in contact with a new form of sophistication, although the apparatus is very expensive and would not be likely to be used by small dealers. The machine is one through which the milk or cream or other mixture is forced under very high pressure (about 3,000 lbs. per sq. in.) in such a way as to break up the butter or fat globules into particles much smaller than normal size. The practical effect of this is to make perfect emulsions which will not separate and, in the case of cream, make a 20% cream look more like a 30% article. The process has many legitimate uses in the ice cream and condensed milk factories, but it is also capable of serious abuses.

The diameter of most of the normal fat globules in milk is between .0003 and .00015 of an inch and that of the homogenized globules between .0001 and .00004 of an inch, but the latter sizes vary with the degree of homogenization. The photographs show the difference in appearance under the microscope.



Taking Sample of City Water at Kanouse Creek, Newark Water Sheds

WATER

Samples of city water analyzed . . . 108

There is little comment necessary on the quality of the city water. Apart from occasional moderate variations in one or more constituents in the samples from different parts of the Watershed, the chemical composition of the water is quite uniform. The only variations of note in the laboratory samples occur when the supply is changed from Oak Ridge to Clinton Reservoir and vice versa, the Clinton water having less total mineral matter than that from Oak Ridge.

MISCELLANEOUS

Analyses of soda water and syrup	38
Saccharin found in these samples	18
Butter (3 were oleomargarine)	6
Well water	7

Other miscellaneous samples included canned goods, olive oil, candy, meat, flour, bread, salad, etc.

The enactment and enforcement during the year of the law regulating the manufacture of "soft drinks" has had the effect of improving sanitary conditions at the factories where these beverages are made and the general discontinuance of the use of saccharin as a sweetening agent.

Several investigations of special interest were encountered during the year. One of these was that of a so-called "A B C" flour used by a prominent baking concern in their bread dough. It was charged that plaster of paris was being used to adulterate the bread. Investigation showed that the concern was using a very small amount of sulphate of lime. This they had found by a long, expensive research to be an excellent food for the yeast plant, but so small an amount is used that it is difficult of detection in the bread by chemical means and is not believed to have any harmful significance. On the other hand, it so stimulates the yeast growth that not only less has to be used, but a better product is the result.

Some potato salad covered with deep red blotches was suspected of being poisoned. It looked as though it might have been daubed with red ink, but examination showed that the color was due to a luxuriant growth of *prodigiosus*, a highly colored but not pathogenic variety of bacteria.

A number of loaves of bread, baked at the baker's from dough mixed at home, caused serious illness in a dozen or more persons who ate it. That the bread was really at fault was confirmed by an experimental portion eaten by the writer and afterwards by the discovery on analysis of the presence of a considerable quantity of arsenic in the remaining loaves. The source of the poison was never ascertained.

The Municipal Chemical Laboratory, recommended in my report of last year, is still needed, although the present is a most inopportune time to equip one on account of the very advanced price of most of the apparatus and the impossibility of getting some of it at all. The present laboratory facilities, however, are being extended sufficiently to largely increase the milk and other work.

Very respectfully,

HERBERT B. BALDWIN,

Chemist

ANALYSES OF NEWARK CITY WATER
Averages of Monthly Examinations 1915
PARTS PER MILLION

SOURCE OF SAMPLES	Temperature Fahr.	NITROGEN AS								Turbidity HARDNESS (ALKALINITY)	Total Solids	Loss on Ignition	Fixed Solids				
		Total nitrogen		Ammonium nitrogen		Nitrate nitrogen		Nitrite nitrogen									
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm								
Oak Ridge Stream	81	0.9	27.1	1.58	0.12	0	11.8	2.83	25.83	54.83	21.16	33.66					
Clinton Stream	11	0.5	21.8	0.28	8.51	0	0.11	2.55	15.11	11.18	1.75	26.43					
Kanouse Brook	17.8	0.54	17.0	1.7	4.85	0	0.86	2.17	18.78	18.68	19.87	28.25					
Echo Lake Stream	18.2	0.54	12.1	0.208	1.67	0	10.1	2.75	20.8	54.83	25.56	32.33					
Maeopin Intake	115	0.51	5.0	0.73	1.50	0	6.70	2.25	19.32	50.1	20.17	30.00					
Cedar Grove Intake	51.6	0.7	6.8	0.142	0.948	0	4.804	2.1	19.31	50.42	21.08	29.34					
Cedar Grove Outlet	33.3	0.5	28.8	0.148	0.948	0	8.21	2.13	19.53	51.67	20.00	31.67					
Belleville Reservoir	72.1	0.5	28.8	0.172	0.914	0	8.21	2.21	20.83	49.67	21.50	28.17					
Laboratory Faucet	33.8	0.5	28.8	0.147	0.942	0	8.21	2.14	20.42	51.33	21.33	30.00					

* Trace

ANALYSES OF NEWARK CITY WATER
 Samples from Oak Ridge Stream before uniting with Cutton Stream at New Foundland
PARTS PER MILLION.

1915	Tempera- ture, Fahr.	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporarily Harmless (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Albuminoid Ammonia	N trites	N trates					
Jan. 2	56	0.5	15	.022	.088	0	.29	1.0	24	52	17	31
Feb. 18	37	0.5	40	.016	.092	0	.13	2.0	15	46	25	21
Mar. 21	37	0.5	25	.018	.084	0	.10	2	23	41	15	26
Apr. 14	43	0.5	30	.012	.094	0	.11	2.5	19	62	15	47
May 26	58	0.5	30	.020	.118	0	.065	2.0	21	50	24	23
June 9	54.5	0.5	20	.008	.102	0	.09	2.0	27	56	20	31
July 14	61	0.5	20	.011	.131	0	.09	2.0	25	56	25	22
Aug. 11	61	0.5	20	.008	.078	*	.165	2.5	28	48	19	20
Sept. 9	65	0.5	40	.028	.120	0	.10	2.0	31	69	25	11
Oct. 19	53	0.5	30	.012	.136	0	.05	2.0	29	63	24	34
Nov. 17	40	0.5	30	.020	.114	0	.10	3.0	31	61	21	30
Dec. 10	32	0.5	15	.012	.078	0	.12	3.0	37	60	10	11

* Trace

ANALYSES OF NEWARK CITY WATER

Samples from Clinton Stream, before junction with Oak Ridge Stream at New Foundland.
PARTS PER MILLION

Date	Temp °F.	NITROGEN-N						Temporary Chlorine	Total Solids	Loss on Ignition	Fixed solids				
		P.D.	Titr nights	Conc A	Conc B	Conc C	Conc D								
June 17	73	0.9	0	0.8	0.88	0	0	10	51	12	9				
July 18	77	0	0	0	0.88	0	0.5	10	43	19	24				
Aug. 1	77	0	0	15	0.16	0.84	0	15	31	16	15				
Sept. 1	71	0.5	2	20	0.11	0.01	0.01	8	55	16	17				
Oct. 19	56	0.5	20	11	0.01	0	0.01	9	45	23	23				
Nov. 1	52	0.5	10	18	0.81	0	0.8	11	46	15	15				
July 11	Sample broken out at 8 A.M.														
Aug. 11	68	0.5	20	0.08	0.78	0	0	12	38	16	22				
Sept. 9	78	0.5	20	0.22	0.02	0.01	0	12	40	17	23				
Oct. 19	54	0.5	1	0.19	0.71	0	0.01	12	55	17	38				
Nov. 1	51	0.5	15	0	0.01	0	0.08	23	47	21	26				
Dec. 1	53	0.5	30	0.80	10.1	0	0.01	11	35	21	14				

* Trace

ANALYSES OF NEWARK CITY WATER

Samples from Kanouse Brook, above Pequannock River

PARTS PER MILLION

	Temperature Fahr.	Turb. ppm	NITROGEN AS						Chlor. ppm	Temporary alkalinity ppm	Total alkalinity ppm	Loss on boiling	Fluor. ppm					
			Ammonium			Organic N												
			NH ₃	NH ₄ -NO ₂	NH ₄ -NO ₃	Organic N	Organic N	Organic N										
Jan 1	33	0.5	40	.022	.094	0	.075	2.0	14	31	15	16						
Feb 18	39	0.5	40	.018	.086	0	.05	2.0	13	37	16	21						
Mar 24	36	0.5	30	.034	.100	0	.075	2.0	19	34	14	20						
Apr 14	42	0.5	40	.018	.082	0	.075	1.5	11	27	19	18						
May 26	55	0.5	70	.022	.128	0	.075	1.5	17	45	22	23						
June 9	51.5	0.5	26	.012	.092	0	.06	2.0	23	66	21	45						
July 11	61	0.5	35	.014	.132	0	.09	2.0	25	69	25	44						
Aug 11	63	1.0	120	.016	.168	0	.15	2.0	15	48	26	40						
Sept 9	61	0.5	50	.015	.164	0	.10	2.0	27	57	22	45						
Oct 19	54	0.5	50	.014	.124	0	.08	2.5	23	56	22	44						
Nov 14	38	0.5	40	.016	.080	0	.08	3.0	18	40	11	20						
Dec 10	33	0.5	30	.012	.052	0	.125	3.0	18	57	24	44						

BOARD OF HEALTH.

ANALYSES OF NEWARK CITY WATER
Samples from Echo Lake Stream, above Pequannock River
PARTS PER MILLION

1915	Temperature, Fahr.	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids	IRON OXYDE HEAT TEST
				Free Ammonia	Albuminoid Ammonia	Ni- trates	Ni- trates						
Jan. 27	5	0.5	10	.038	1.8	0	.075	2.0	19	54	27	27	
Feb. 18	7	0.5	10	.022	1.2	0	.05	2.0	16	51	22	29	
Mar. 23	36	0.5	55	.18	.91	0	.10	2.0	23	48	19	29	
Apr. 13	12	5	10	.036	1.8	0	.10	2.0	15	50	18	32	
May 26	72	0.5	10	.018	1.8	0	.10	1.5	16	50	29	41	
June 9	72	0.5	25	.011	.098	0	.13	3.0	20	55	14	41	
J. y. 14	75	0.5	7	.022	1.8	0	.15	2.0	21	67	32	35	
Aug. 11	68	1.0	60	.008	1.8	0	.15	2.0	18	53	25	28	
Sept. 9	68	0.5	60	.012	1.0	0	.10	2.0	26	68	33	35	
Oct. 19	52	0.5	60	.026	1.0	0	.08	2.5	28	73	41	32	
Nov. 17	57	0.5	20	.014	.78	0	.08	3.0	21	70	23	47	
Dec. 10	32	0.5	10	.08	1.61	0	.10	3.0	23	55	13	3.	

ANALYSES OF NEWARK CITY WATER
Samples from Macopin Intake, at Gatehouse
PARTS PER MILLION.

Tempera- ture F	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
			Free Ammonium	Amino-Nitrogen	Nitrites	Nitrate					
Jan 27	34	0.5	30	.020	.098	0	.085	3.0	17	57	15
Feb 18	36	0.5	35	.018	.092	0	.05	2.0	15	37	13
Mar. 24	40	0.5	25	.022	.076	0	.10	2.0	21	37	16
Apr. 11	43	0.5	35	.016	.090	0	.075	2.0	14	43	15
May 26	55	0.5	35	.028	.130	0	.075	2.0	17	49	24
June 9	58	0.5	20	.018	.094	0	.07	2.5	17	43	19
July 1	62	0.5	15	.010	.09	0	.08	2.0	25	61	17
Aug. 11	68	1.0	10	.012	.118	0	.08	2	17	51	25
Sept. 9	70	0.5	15	.012	.142	0	.09	2.0	22	64	27
Oct. 9	57	0.5	15	.024	.138	0	.09	2.5	31	52	19
Nov. 7	6	0.5	15	.014	.098	0	.08	3	28	68	40
Dec. 1	2	0.5	10	.014	.04	0	.01	2.0	15	40	24

ANALYSES OF NEWARK CITY WATER.
 Samples from Cedar Grove Reservoir, at Inlet Gatehouse
 PARTS PER MILLION.

1915	Date	N - 40 - EN - AS						I - P - T - A - R - Y			Total Solids	Loss on Ignition	Fixed Solids
		ture, F.	6 harity	Color	Per cent Acid	Alkaline Ash	NH ₃	N ₂	Time	Hardness Acet. soln.			
Jan. 27	6	0.7	2	2	.098	0	.075	2.0	17	47	26	21	
Feb. 18	6	0.5	2	0.8	.090	0	.065	2.0	15	35	15	20	
Mar. 1	12	0.3	2	0.1	.081	0	.075	2.0	22	42	20	22	
Apr. 11	6	0.3	2	1.6	.084	0	.11	2.0	14	68	27	41	
May 26	18	2	20	2	.090	0	.075	2.0	14	42	10	26	
June 9	6	2	20	2	.091	0	.07	2.5	17	47	22	25	
July 13	25	2	20	0.1	.072	0	.075	3.0	19	52	24	28	
Aug. 11	13	0.3	6	.006	.088	0	.125	2.0	5	14	1	2	
Sept. 1	22	0.3	2	0.1	.082	0	.13	2	22	30	10	20	
Oct. 11	6	0.3	2	11	.11	0	.12	2	30	46	14	1	
Nov. 1	3	2	20	17	.094	0	.08	2.0	5	42	—	6	
Dec. 10	25	0.0	2	0.1	.096	0	.09	2.0	8	40	—	8	

BOARD OF HEALTH.

ANALYSES OF NEWARK CITY WATER
 Samples from Cedar Grove Reservoir, at Outlet Gatehouse
 PARTS PER MILLION.

1915	Tempera- ture, Fahr.	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Absorbed Ammonia	Ni- trites	Ni- trates					
Jan 27	35	0.5	40	.034	.092	0	.15	2.0	20	55	21	11
Feb 18	1	0	10	.022	.090	0	.05	2.0	16	47	17	30
Mar 24	40	0.5	25	.014	.074	0	.075	2.0	21	45	18	14
Apr 14	47	0.5	25	.014	.094	0	.100	2.0	14	55	15	40
May 26	59	0.5	20	.020	.090	0	.075	2.0	14	43	19	21
June 9	75	0.5	20	.016	.152	0	.06	2.0	19	47	18	31
July 11	71	0.5	20	.010	.088	0	.07	3.0	19	51	20	11
Aug 11	70	0.5	30	.006	.088	0	.10	2.0	23	49	24	15
Sept 1	63	0.5	25	.012	.082	0	.09	2.0	21	53	26	14
Oct 19	58	5	25	.012	.118	0	.05	2.5	28	69	26	14
Nov 17	4	5	25	.012	.090	0	.08	2.0	25	59	25	11
Dec 6	1	5	25	.006	.090	0	.09	2.0	15	47	11	6

BOARD OF HEALTH.

ANALYSES OF NEWARK CITY WATER

Samples from Belleville Reservoir, at Inlet Gatehouse.

PARTS PER MILLION

1916	Temper- ature, Fahr	Tur- bidity	Color	NITROGEN AS				Chlorine	Temp orary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Azotinoid Ammonia	M ethanes	Nitrate					
June 25	75	0	20	.18	.094	0	.10	2.0	21	47	24	23
Feb. 8	58	0	20	.022	.090	0	.07	2.0	15	42	19	23
Mar. 24	70	0	25	.11	.074	0	.075	2.0	20	31	11	20
Apr. 15	78	0	25	.20	.090	0	.10	2.0	14	51	22	29
May 20	65	0	20	.21	.104	0	.075	2.0	14	50	21	29
June 1	65	0	25	.018	.090	0	.08	2.5	17	42	23	19
July 14	67	0.5	20	.018	.080	0	.075	2.0	26	62	25	37
Aug. 11	72	0.5	30	.006	.082	0	.10	2.0	23	50	21	29
Sept. 9	72	0.5	35	.012	.088	0	.08	2.0	21	54	24	30
Oct. 19	60	0.5	35	.010	.106	0	.05	2.5	29	57	27	30
Nov. 17	42	0.5	30	.014	.094	0	.08	2.5	28	51	25	32
Dec. 10	57	0	0	.016	.090	0	.10	3.0	22	53	16	37

ANALYSES OF NEWARK CITY WATER
 Samples from Laboratory Faucet, 927 Broad Street
PARTS PER MILLION

Date	Tempera- ture, Fahr	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Absorbed Ammonia	Ni- trites	Ni- trates					
Jan. 16	37	0.5	30	.018	.094	0	.10	2.0	21	52	18	34
Feb. 18	40	0.5	30	.022	.088	0	.07	2.0	15	50	14	36
Mar. 21	41	0.5	25	.016	.068	0	.075	2.0	20	33	13	20
Apr. 1	48	0.5	25	.020	.092	0	.10	2.0	14	53	29	24
May 26	59	0.5	35	.022	.110	0	.075	2.0	16	49	21	28
June 1	62	0.5	20	.018	.092	0	.08	2.0	18	49	21	28
J. 14	67	0.5	20	.012	.088	0	.075	2.0	19	48	23	25
Aug. 1	72	0.5	30	.006	.086	0	.10	2.0	23	53	21	32
Sept. 3	68	0.5	35	.012	.088	0	.08	2.0	21	50	26	24
Oct. 19	60	0.5	35	.010	.140	0	.05	2.5	28	67	21	46
Nov. 15	47	0.5	30	.014	.092	0	.08	2.5	28	62	26	36
Dec. 1	11	-	30	.016	.092	-	1	2.0	22	53	23	24

ANNUAL REPORT
OF THE
BUREAU OF TUBERCULOSIS

ANNUAL REPORT
OF THE
BUREAU OF TUBERCULOSIS

January 1st, 1916.

Charles V. Craster, M. D., D. P. H., Health Officer

DEAR SIR:—Herewith I present the report of the Bureau of Tuberculosis for the five and one half months of its existence. The sanatorium report will be given in two periods. The first will cover the six and one-half months of the year, prior to its coming under the supervision of the Bureau, and will be as complete a record as possible from the data available. The second period will cover the five and one-half months since the Bureau was established, July 16th, 1915. The report will also be made in two divisions, medical and financial.

SANATORIUM AT VERONA.

MEDICAL REPORT FROM JANUARY 1 TO JULY 15, 1915

Patients in Sanatorium January 1, 1915	55
Patients admitted from January 1 to July 15, 1915	87
	—
	142
Patients discharged from January 1 to July 15, 1915 . . .	89
Patients died in same period	2
	—
	91
Patients in Sanatorium July 15, 1915	51
No record of the classification on admission of the 142 patients could be found	

RECORD OF CONDITION ON DISCHARGE

This showed that 6 patients stayed too short a time to warrant classifying as to condition. Only those whose stay was a month or more were included. These numbered 83 and on the record were classified as follows:

Quiescent .....	.....	.....	41
Improved .....	.....	.....	26
Unimproved .....	.....	.....	16

DEFINITION OF TERMS.

I judge from the terms used, that these patients were classified according to the schema of the National Association for the Study and Prevention of Tuberculosis, and it will be necessary to give the definition of these terms to properly show the results of sanatorial care and treatment during this six and one-half months. This schema gives the following definitions.

Quiescent: "Absence of all constitutional symptoms; physical signs stationary or retrogressed; the foregoing condition to have existed for 2 months, expectoration with bacilli may or may not be present."

Improved: "Constitutional symptoms decreased or absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present."

Unimproved: "All constitutional symptoms and physical signs unabated or increased."

The average stay of these 83 patients was $4\frac{1}{4}$ months. The longest individual stay was 14 months, 9 days; the shortest, 1 month, 1 day. Naturally those who had been longest in the sanatorium were the ones classified as quiescent.

RECORD OF THE 51 CASES INHERITED BY THE
BUREAU JULY 16, 1915.

When the Bureau took over the supervision of the sanatorium, the census showed 51 patients, who, by examination, were classified as follows.

Quiescent	.....	22
Improved	~	
Unimproved		11

Of the unimproved, 3 were in such condition that they were either sent home or to a hospital, all have since died.

Of the quiescent cases, 18 had expectoration with bacilli; 4 had had negative sputum 2 months, but had marked pulmonary lesions. All of the improved and unimproved had positive sputum.

SCIENTIFIC TREATMENT INSTITUTED

The subsequent history of the remaining 48 patients is interesting. So as to obviate any wrong impression that may be held concerning the use of tuberculin at the sanatorium, it might be well to state here, that before treatment the permission of the patient is always obtained.

There has been more or less antagonism to tuberculin treatment which may be said to be due to two causes. The first is, that failures and bad results have come from its use, resulting from the mistaken idea that it is a cure all. The second is that those physicians meeting with failure, often, and those meeting with bad results, nearly always, rush into print, giving a history of failure or bad results, making denial of any value as a remedy and warning

against its use. True to human nature, which is prone to criticise, many readers of such denunciatory articles have accepted such views with the result that today the most strenuous decriers of the use of tuberculin are those who have never used it. It is fortunate, however, that in the medical profession there have always been some who, before making statements or accepting hasty conclusions, have questioned the reason for failure to achieve good result, be it of new remedy or operation, in order to determine whether the result is due to lack of complete knowledge of the subject or absence of finished technic. The searcher and investigator have a basis for recommendation or condemnation, which the jumper at conclusions can never have. As Kolmer, of the University of Pennsylvania, has said in his recently published book on Infection, Immunity and Specific Therapy, speaking of tuberculin: "Accepting as evidence only the statements of those who have used tuberculin and not of those who believe it to be dangerous and have never used it, one deduction is justified; that while tuberculin is not a specific 'cure' for tuberculosis any more than hygiene, diet and climate are cures--it helps to arrest the disease and is in general a useful factor in the treatment of certain types of the disease."

Reasons for the Use of Tuberculin. -Tuberculin has been used at the sanatorium knowingly, after experience through many years. Many case histories in the past have shown failures and some bad results, but the writer has always had faith that the method, not tuberculin, was at fault. It is used at this time scientifically with a definite purpose in view, not as a cure, but as a means of overcoming toxicity, and for augmenting the patient's ability to manufacture anti bodies. The fact should not be lost sight of in such treatment that the tuberculous person is markedly sensitive to tuberculin, and that the reaction

point should always be slowly and cautiously approached. When this point is reached, there should be only the slightest possible degree of reaction, whether constitutional, food or local. A failure on tuberculin alone, regardless of an abundance of other signs, is no good sign; will bring disappointments and regrets. With this exposition of the treatment policy, I am ready to give an account of the 48 patients remaining in the sanatorium July 20th. Four are still in the sanatorium, making 44 who have been discharged.

Record of Condition on Discharge after the Scientific Use of Tuberculin

Arrested ..	.....	.....	4
Apparently arrested ..	.....	.....	12
Quiescent (sputum negative) ..	.....	.....	22
Improved (sputum negative) ..	.....	.....	6

Compare this with the record of the first six months:

Quiescent ..	.....	.....	41
Improved ..	.....	.....	26
Unimproved ..	.....	.....	16

Definition of Terms.—The National Association defines arrested and apparently arrested as follows: Arrested: "All constitutional symptoms and expectoration with bacilli absent for a period of 6 months physical signs to be those of a healed lesion." Apparently arrested: "All constitutional symptoms and expectoration absent for a period of 3 months; physical signs to be those of a healed lesion."

The 4 arrested cases were the 4 quiescent cases with negative sputum. Two of them are attendants at the clinic, and now have a record of 8 months with negative sputum, both are in fine physical condition with the prospect of reaching the National Association's apparently cured class, namely: "All constitutional symptoms and expectoration with bacilli absent for two years under ordinary conditions of life." Two have moved to other places.

The 12 apparently arrested cases were of the balance of the quiescent cases (18) all of whom had positive sputum. The majority of these are in attendance at the clinic and are approaching the arrested class. Of those who do not attend, some have moved to other places, while some, unmindful of their improvement at the sanatorium, are wilfully neglectful of the opportunity the clinic affords.

The 22 quiescent cases with negative sputum were the 6 remaining cases with positive sputum and 16 of the improved cases. Less than half of these are attendants at the clinic; some cannot be located; others, like some of those in the apparently arrested class, will not come to the clinic.

The 6 improved cases with negative sputum were the 2 remaining improved cases with positive sputum and 4 of the unimproved, none of these can be located.

All who have continued treatment at the clinic have continued to improve, as all fortunately are able to have housing and food conditions, which, while not in all cases equal to those they had at the sanatorium, approximate them to an extent which aids them in their improvement.

REPORT OF PATIENTS ADMITTED FROM JULY 16TH,
1915 TO DECEMBER 31ST, 1915

Admitted previously	4
Patients admitted from July 16, 1915, to January 1, 1916	113
	117
Patients too far advanced to remain	
Patients deserting after a short stay	
Died	21
	—
Number discharged	34
Patients in Sanatorium January 1, 1916	62

Condition on Admission.—Only the 34 discharged will be included in the report, as the 8 who were too far advanced and the 12 who deserted were in the sanatorium too short a time to receive benefits from environment, food or treatment.

The classification of the 34 on admission was as follows:

Incipient .....	.....	14
Moderately advanced .....	.....	15
Far advanced .....	.....	5

Definition of Terms. It will be necessary to give the National Association's definition of these classes. As they are very lengthy, I will abbreviate them somewhat, as follows:

Incipient: "Slight or no constitutional symptoms, slight or no elevation of temperature or acceleration of the pulse—expectoration absent or small in amount, bacilli may be present or absent; slight infiltration limited to apex of one or both lungs, or to a small part of one lobe; no tuberculous complications."

Moderately advanced: "No marked improvement of functions, either local or constitutional; marked infiltration more extensive than under incipient, with little or no evidence of cavity formation, no serious tuberculous complications."

Far advanced: "Marked impairment of function, local and constitutional; extensive localized infiltration or consolidation in one or more lobes; or disseminated areas of cavity formation; or serious tuberculous complications."

Five of the incipient cases had positive sputum, and also all of the moderately and far advanced. The average time in the sanatorium was 4 months, the longest individual stay was 5 months 10 days, the shortest 1 month and 4 days.

Condition on Discharge.

Apparently arrested.....	17
Quiescent with negative sputum	12
Improved with negative sputum	2
Unimproved	3

No patient discharged at 4 months can be classified as arrested, as it is impossible to demonstrate a healed lesion in that time. The patient who stayed 1 month and 4 days was an incipient case, with negative sputum, who left against advice and went to Pennsylvania. His pulmonary condition had improved at the time he left. A letter received from him states that his improvement has continued and he is classed among the apparently arrested.

The balance of the apparently arrested cases were the 13 other incipient and 3 of the moderately advanced cases. The 12 quiescent cases with negative sputum were the balance of the moderately advanced. The 2 improved with negative sputum were 2 of the far advanced. Both of these last left against advice, as they had not made improvement in pulmonary lesion to warrant leaving the sanatorium; both are at their homes and under the care of private physicians.

Again I have to report that some of the apparently arrested cases will not come to the clinic, insisting they are all right. The same is true with 5 of the quiescent cases; one of the quiescent cases with bad housing and food conditions retrogressed so markedly that he has returned to the sanatorium, thus emphasizing the fact that scientific treatment will not avail if housing and food conditions are not proper.

The 4 patients in the sanatorium July 16th, 1915, are still in the institution, all have made great improvement in pulmonary lesions, but their bacilli is slow in disappearing.

The condition of the 62 in the sanatorium January 1st, 1916, is as follows:

Quiescent	10
Improved	10
Unimproved	0

FINANCIAL REPORT

Expenses, first six months	\$16,719.04
Expenses, second six months.....	19,007.73
Total	\$36,656.81
Food, per capita, first six months	\$.9366
Food, per capita, second six months	5745
Overhead, per capita, first six months ...	.9138
Overhead, per capita, second six months ..	971
Total food and overhead, per capita, first six months...	1,8504
Total food and overhead per capita, second six months.	1,5455
Improvement and repair account, first six months....	546.66
Improvement and repair account, second six months ...	2,758.63

Better Food, Less Cost Per Capita. The lower food per capita for the second six months was due to two reasons, one, that an average of 70 patients was cared for against an average of 50 for the first six months, and the rule that in a household food expenses do not increase in the same ratio as does the increase in members of the family, the same being true in an institution of this kind. Second, that close supervision of food led to less loss through food that could not be eaten and to a better quality of food, so that patients received sufficient caloric value at reduced cost. This per capita saving was attained principally in meats, eggs and milk.

Necessary Help Provided—The slightly increased overhead per capita was due to the fact that for efficiency of administration, more help was needed, that many repairs to the building were demanded and a number of improve-

ments essential. It is in this connection, a pleasure to note, that the increased overhead cost was more than counterbalanced by reduced food expenses.

Betterments in Building The large increase in improvement and repair account is justified by the results attained. These are a safeguarding of life by fireproofing the ceiling of the boiler room and by the erection of fire escapes.

A safeguarding of physicians in charge and nurses, from a possible source of infection, has been guaranteed by installing a separate pantry for washing dishes in the doctors' and nurses' dining room, thus making impossible any contact between their dishes and those of the patients.

New Shower Baths Provided for Patients An improved sanitary condition of the sanatorium has been effected by a sanitary shower bath and individual stationary hand basins in the place of the unsanitary stationary bath tubs, as well as a sanitary drinking fountain has been installed. Sanitary steel lockers have been provided in place of the unsanitary wooden ones, also an extra water heater to insure an additional supply of boiling water for dish-washing purposes. A crockery closet in the dish lavatory has been provided, thus making it impossible for dust and flies to come into contact with dishes after being washed. A third of the interior walls and ceilings have been repainted in such a way as to make them less liable to catch and retain dust.

An increased efficiency of the sanatorium was effected by changing two lounging pavilions into sleeping pavilions to accommodate 16 patients.

FIELD WORK

The organization of the field work of the Bureau was somewhat delayed by the more pressing necessity for a reorganization of the sanatorium, which required a daily visit on my part for nearly two months, during this time the nurses, whose number had been increased from two to five, were engaged solely in visiting those families who were on the visiting list before the advent of the Bureau, and those which were reported from day to day.

Systematic Work Begun.—About the middle of September a reorganization of the field work was inaugurated. Such work had up to this time consisted in the two department nurses visiting homes, giving instructions necessary for the safeguarding of those necessarily in contact with tuberculous cases; in committing the deliberately careless open tuberculous cases to Soho, and in making adjustments in the homes so that a patient could go to a sanatorium. One day in the week was taken for examining applicants for admission to the Verona Sanatorium, and on another day a clinic for treatment was held.

Intensive Investigations of Home Conditions—The lines on which the reorganization was laid were much broader; the nurses, in addition to their previous work in the home, took up the investigation of every case coming to the knowledge of the Bureau, such investigations covering, in addition to that ordinarily obtained, the number of exposed adults and children in the family and also of any other occupants of the building who may have been somewhat closely in contact with the one under investigation; the house environment, as to the number in the family, number of rooms, how many of those sleeping rooms, number of beds in sleeping rooms; whether the patient sleeps in a room by himself or herself, or if not, in a separate bed; the opportunity for making a sleeping porch or bed window.

or for giving home care and treatment; whether any tuberculous persons were previous occupants of dwelling or rooms; the number of people in tenement, apartment or two-family house; whether any relations in other parts of the city have tuberculosis, and if so investigate these. Also they investigate the character of the occupations; whether any active tuberculous employees; whether the place of work has a good supply, or otherwise, of fresh air and sunlight. Also the sanitary condition of the homes and place of occupation, and neighborhood of homes and place of occupation, are investigated, also the economic conditions of the home are investigated.

This intensive investigation is undertaken to obtain data bearing on the relation of housing conditions, home and place of employment environment, occupation and poverty, to the problem of tuberculosis, so as to be in a position to formulate a far-reaching effective plan of prevention and control.

Growth of Field Work—The number of visits made by the nurses from January 1st to July 15th was 1,790. The record does not show how many families were visited. From July 15th to December 31st, 3,976 visits were made on 775 patients. These visits were made on those, who, for one or another reason, could not be removed to a sanatorium, and on those patients returned from the sanatorium. Return visits are made to ascertain the extent to which the instructions have been carried out; reporting violations of the rules given to them, following this with commitment to Soho if the disobedience of the rules is maintained.

Follow-up Work—In the houses of those returned from Sanatoria they endeavor to, as nearly as possible, make the home conditions approximate sanatoria conditions, using both private and public relief organizations for this purpose, and also insure the attendance of such patients at the clinics.

Effort is also made to obtain employment for those whose previous character of employment is known to be prejudicial.

Investigations - In addition to visits the nurses have made 263 adjustments by means of which the infected father or mother has been able to leave the home for sanatorium or hospital treatment

Also 720 investigations coming to the Bureau from various sources have been made, and where the investigation has discovered a patient with tuberculosis, such case is reported back to the Bureau. The value of these investigations is shown in the discovery of tuberculous persons who, but for the investigation, would have gone undiscovered for an indefinite time. Many of these, too, have been active spreaders of infection

The expectation of the Bureau is that when the stress of organization is over, and the vast amount of work accumulated before the chief had a secretary is caught up with, making it possible to meet each day the necessities and demands of that day, the information as to housing conditions it can give to the Health Officer will lead to great improvement in such conditions. If this improvement alone is brought about, it will enable the Bureau to make some headway in the effort to control tuberculosis.

Important Feature -Another important feature brought out by the investigation is the number of adults and children frequently found exposed in the family of a tuberculous case. Results have showed this information to be of great importance, both from a preventive and curative standpoint

One of the duties of the visiting nurses is to persuade all of such exposed persons to call at the clinics for examination and continued observation

Dangerous Exposure to Infection.—Only those in which there is a positive evidence of a disregard for the ordinary procedures to prevent spreading the infection, such as carelessness in the case of sputum; the common use of tableware and of towels; unlimited kissing, sleeping in the same bed with a tuberculous husband, wife, brother or sister, or those who live in crowded rooms with a tuberculous person, where there is insufficient air space and little or no sunlight, are classed as the undoubtedly exposed. The examination of such exposed in the short time this work has been done shows startling results, which will be given under the work of the clinics.

Poverty, Bad Housing and Tuberculosis.—We reproduce a photograph taken in this city which graphically shows the causative relationship between poverty, and its consequent bad housing conditions, and tuberculosis.



This is a photograph of a home, in which lived a husband, wife and 3 children. The dimensions of the two rooms are the same. 10x8: on the bed in the inner room was a man sent home from a hospital a week before I saw him; he evidently had but a few hours to live. Racked with a cough which brought up quantities of sputum, he endeavored to expectorate in a sputum cup, but in his weakened condition he more often failed than succeeded in his effort. The sheet, the floor, a small rag rug, his wife's clothing, were saturated with bacilli laden sputum. Little sunlight, and that for only a short part of the day, found its way into this room. On the corner bunk in the other room two of the children slept. The youngest child, but 6 months old, slept in a carriage. In this room, also, the cooking was done.

As stated earlier in my report, previous to the establishment of the Bureau, there was but one clinic a week held; the only other tuberculosis work done in the city dispensary was three mornings given to examinations for admission to Verona, Soho and Glen Gardner. Monday morning is still given to examinations for admission to Verona.

The applications for admission to the sanatorium during the first six and one-half months of the year were 240. The knowledge that the Board of Health had begun an active campaign against tuberculosis, and that the sanatorium was to be conducted on broad lines, seemed to spread quickly all over the city, and in consequence, since the inauguration of the Bureau five and one-half months—the examinations for admission to the sanatorium have been 292.

In the middle of September, coincident with the beginning of intensive work by the nurses, seven additional clinics were instituted; these were 4 adult pulmonary clinics, 2 children's clinics, 1 laryngeal and 1 surgical clinic weekly; these clinics were started to care for the increased attendance which was confidently expected to follow the work of the nurses, especially that part of it which had in view the examination of all those exposed to a tuberculous person.

Adult Clinic. That this confidence was well founded was quickly proven, for the adult attendance jumped from an average of 8 at the former single clinic, to an average of 24 at each of the four adult clinics; at the present time this number taxes the capacity of the clinic to the utmost.

The records of these clinics for the three and one-half months of their existence show 104 exposed adults examined, 15% of whom have been found to be tuberculous.



Making a Von Pirquet Test for Tuberculosis

Children's Clinics. In the children's clinics 171 exposed have been examined and 75% found to be tuberculous. These children have ranged in age from 6 months to 15 years. A comparison between this percentage and that of the results of exposed adults shows the special susceptibility of children to the infection. Very few children will escape infection in a home, where the father, mother, brother or sister with open tuberculosis is careless with sputum or neglectful of the instructions given by the nurse upon the necessity of using separate dishes and towels, of a separate sleeping room, if possible, and absolutely a separate bed, and of refraining from kissing.



The large number of children found to be infected is an unanswerable argument for an open-air school as a part of every school, and for a preventorium for children. If these figures hold true through month after month of investigation in the future, how appalling will be the number of children found to be infected, who, if not properly cared for, will eventually keep full the ranks of the adult, dangerous, open pulmonary cases! The home, a photograph of which appears on page 139 is but one of thousands of the same kind in the city, and the photograph of the two infected children is an example of what will occur in every one of these homes.

Laryngeal and Surgical Clinics—In the two other clinics established, laryngeal and surgical, the attendant has not grown so rapidly, the average attendance of each being at this date 8.

The clinics are not confined to the examination of exposed adults and children, but also give scientific treatment to ambulatory negative sputum cases, and to returned Verona cases.

The Value of Clinics.—The clinics are thus of great economic value to the city, as they permit the ambulatory case, with negative sputum, to receive treatment and remain at work, thus insuring the earning value of such patients to the home.

The same holds true with the arrested, apparently arrested and negative sputum cases returned from Verona, as these are encouraged to work and continue treatment at the clinics.

Another branch of the work of the Bureau is the attendance on those far advanced cases coming under observation of the nurses, who have no physician. The clinical assistant who does this work has visited since the establishment of the Bureau 100 such patients. In the majority of these he has been able to secure admission to a hospital or to Soho.

The Need for Local Tuberculosis Clinics.—The Bureau has knowledge of a large number who should attend the clinics, who cannot do so because of the distance they have to come. Some of these are mothers, and the time consumed in coming to the clinic, waiting their turn and getting back home is prohibitive. Others are men who work so far away from the clinic that they cannot get to it in time. Others are children whom mothers cannot bring, because of the distance to the clinic.

Thus there are many who are not only deprived of the educational advantages of the clinics, but also lose the

opportunity of an early recognition of tuberculous infection, thus demonstrating the need of clinics in various parts of the city. I should consider myself negligent of my serious duty did I not call attention to this need and urge the establishment of such clinics.

In closing this report I must express a conviction long held and more firmly established by my experience as chief of the Bureau for the past five and one half months; this conviction is that tuberculosis—in Newark the most demanding problem in preventive medicine—has among the chief underlying causes, poverty and bad housing. Improvement in such conditions is made more imperative by our limited sanatorium accommodations. Bad housing may be bettered by the enforcement of the State Tenement House Law and of the ordinances of the Board of Health, and it is my hope to have the Bureau, in the coming year, constitute a large factor in bringing about such an improvement as contemplated.

Respectfully submitted,

THOMAS N. GRAY, M. D.,

Director



Pharmacy at City Dispensary



Record and Information Desk—C. ty Dispensary

ANNUAL REPORT
OF
THE CITY DISPENSARY

The City Dispensary

The present system of special clinics in the City Dispensary originated 24 years ago. One department was added after another until at the present time we have in the City Dispensary, special clinical divisions for all the main branches of medicine and surgery.

The development of the Dispensary from its modest beginning has been no easy process and our eventual success has been entirely due to the unselfish work of less remunerated physicians who have given their time unstintingly in the past, without any thought of remuneration.

The spirit displayed by the early workers has been well reflected in the high standard and excellence of the service obtained in these free city clinics. The efficiency of the work accomplished in our clinics has attained a high plane and credit for this must also be accorded to the generous supply of modern instruments provided by the Board of Health.

The general plan or outline for the new clinics of the City Dispensary was developed as the result of visits paid to medical centers of high standing in the country.

GENERAL ARRANGEMENTS.

The Pharmacy and separate rooms for clinics occupy the entire second floor of the Board of Health Building.

The surgical department is equipped in every detail for aseptic work and includes an up-to date operating room for the performance of minor surgical operations.

The genito-urinary department has its special requirements for cystoscopy and other means for diagnosis. Each clinic has received consideration according to its own peculiar needs.

The clinic rooms open upon a common corridor which acts as the main waiting room, having a seating capacity for 200 patients. The pharmacy and general information bureau are situated conveniently at the entrance, overlooking the waiting rooms, an arrangement that makes for close supervision by the Superintendent.

The demands of the clinics have been met by arranging certain days and hours for each clinic at intervals of several days, with the exception of the medical, surgical, tuberculosis and children's clinics, the requirements of which have demanded the holding of daily clinics.

The recent employment of a pathologist for the Dispensary has been found especially useful in the diagnosis of early syphilis, tuberculosis and gonorrhea. Greater freedom in using the Wassermann test has aided in the better regulation of the treatment of syphilis. Patients have learned to recognize the value of this control of treatment and do not discontinue their visits until a negative result is obtained by this test.

Applicants for free treatment in the clinics have increased from an initial attendance of 6 or 7 for each clinic to 30 or 40, and in one clinic a daily average of 90 patients has been recorded. While nearly all who apply are worthy there are nevertheless a number who could well afford to pay. This abuse of charity would seem to be on the increase throughout the community and its control has been a subject for general discussion. The method employed for determining the worthiness of applicants for free medicine or treatment in the City Dispensary takes the form of an inquiry into the social and financial status of all patients.

When doubt arises in any case, further information is sought by visitation to the homes of the applicants. This method of checking abuse, while resulting in some improvement, cannot be said to be effective in all instances. Some benefit might be attained by the installation of a central bureau of information, which all the clinics could use for their own protection.

We believe that the Newark City Dispensary fulfills the purpose for which it was established, to relieve the sufferings of the worthy poor.

From an economic standpoint, it is of value to the community inasmuch as its particular function has been not alone the relief of established disease, but a means of preventing many diseases from becoming chronic, and in this way preventing many persons from becoming patients in our hospitals as well as, by reason of incapacitating diseases becoming permanent charges upon the charity of the city itself.



Surgical Clinic at the City Dispensary

TOTAL ATTENDANCE AT THE CITY DISPENSARY BY MONTHS
AND DISEASES TREATED

CLINICS, 1915	Jan Feb Mar April May June July Aug Sept Oct Nov Dec Total												
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Medical	741	19	841	17	643	19	644	624	672	646	616	616	7908
Surgical	854	8	89	13	103	8	84	78	66	868	72	189	823
Skin	218	16	21	16	25	212	21	161	14	187	143	110	988
Syphilis	243	26	292	22	161	208	181	173	197	18	140	12	143
Children	190	66	70	204	17	206	208	12	186	23	143	146	111
Women	84	12	13	11	11	9	117	9	6	83	71	9	121
Genito-urinary	487	19	280	285	288	308	250	24	28	24	24	9	607
Eye, ear, nose and throat	154	7	118	11	110	125	75	100	77	99	114	11	11
Nerve	216	16	89	21	13	17	17	17	150	27	142	4	266
Tuberculosis	17	13	18	21	18	228	11	12	8	10	6	6	288
Dental	14	113	60	52	18	110	1	18	14	1	1	1	18
Vaccinated	1	29	43	2	58	1	1	6	36	1	3	1	87
Orthopedic	6	4	8	5	1	12	11	2	1	28	18	23	111
Total treated	1041	181	1029	1398	3091	328	33	2963	3036	3260	2939	2599	38848
Clinic prescriptions	176	188	11	4212	4230	4503	4855	9886	4263	4380	4243	1	361

PATIENTS SENT TO HOSPITALS BY PERMIT ISSUED FROM THE DISPENSARY
FOR CITY HOSPITAL AND CITY BEDS IN OTHER HOSPITALS

HOSPITAL	Jan	Feb	Mar	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec	Total	BOARD OF HEALTH
City	66	2	7	11	58	61	59	11	41	30	42	50	425	
St. Michael's	6	8	1	8	9	11	12	12	12	1	8	10	124	
St. Barnabas'	1			12	11	1	8	4	6	7	7	12	97	
St. James'	7	6	7	7	8	9	6	6	6	4	6	8	82	
German	10	12	9	1	4	6	12	12	11	1	12	10	102	
Beth Israel	11	1	1	2	12	1	15	10	11	1	1	8	127	
Woman and Children's	1		2	5	1	1	3	1	6	8	1	6	37	
Home for Crippled Children	1		1	6	2	2	2	2	1	8	1	2	23	
Eye and Ear Infirmary	16	1		26	18	12	23	1	27	11	20	11	238	
Babies'	15	18	1	22	12	2	21	23	25	16	17	1	218	
Tuberculosis Sanatorium	13	10	12	11	17	13	11	21	15	16	15	20	171	
Total	187	17	88	18	151	176	169	160	161	144	11	179	1,873	

VACCINATIONS IN THE CITY DISPENSARY AND
PUBLIC AND PAROCHIAL SCHOOLS SINCE 1901

1901	28,288
1902	26,043
1903	4,671
1904	5,555
1905	8,243
1906	3,052
1907	1,954
1908	1,540
1909	1,401
1910	5,156
1911	5,828
1912	6,300
1913	5,537
1914	5,414
1915	7,478
Total	116,460

DISTRICT PRESCRIPTIONS—1915

DISTRICT	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
First	97	124	1	1	18	18	11	81	33	11	11	111	49
Second	66	5	1	1	18	1	1	1	20	20	1	25	1
Third	70	63	1	8	1	51	28	29	17	1	1	1	177
Fourth	109	91	1	8	1	11	8	7	1	1	11	61	412
Fifth	79	82	1	1	20	1	1	17	17	1	16	61	361
Sixth	46	38	1	1	1	1	20	1	28	1	2	9	40
Total	467	450	47	391	257	287	231	275	247	223	242	331	3,870

BOARD OF HEALTH.

RECAPITULATION

Total number of patients treated	38,848
Total number of Prescriptions	55,139
Total number of patients sent to hospitals	1,660
Total number of vaccinations	7,478

**SUMMARY OF SERVICES RENDERED BY THE
DISTRICT PHYSICIANS**

	1	2	3	4	5	6	7	8
Actual No. of houses visited	100	770	512	58	43	90		
Actual No. of families visited	80	200	180	5	1	7	300	
No. of sick prescribed for	917	28	8	151	4	1	625	
No. of sick treated by others		18	11	8	8	6		
Total No. visits made	1181	1196	11	11	11	11	121	
No sent to hospitals	92	11	9				15	
No. of deaths	13	7	4	2	1	1	10	

REPORT OF MEDICAL INSPECTION OF PAROCHIAL SCHOOLS

There are twenty-five parochial schools in the City of Newark, which are divided into five districts. Five physicians are detailed as Medical Inspectors, whose duties are to visit the parochial schools daily between the hours of 9 and 11 A. M., and make weekly and monthly reports to the Health Officer.

First District—Dr. H. C. Povey, 89 Mott Street.

St James' School, 185 Elm Street	147	100
Our Lady Mt Carmel School, 391 Market Street	250	
St Benedict's School, 63 Komorn Street	5	
St. Aloysius' School, 36 Freemag Street	5	
St Casmer's School, 95 Tyler Street	69	
St Mary Magdalene's School, 35 Esther Street	68	"
		603
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REPORT OF MEDICAL INSPECTION OF PAROCHIAL SCHOOLS OF DISTRICT NO. 1, FOR 1915

Number of schools visited daily	6
Number of school days during year	192
Total number of visits during year	112
Number of pupils examined (male)	245
Number of pupils examined (female)	278
Total number of pupils examined...	523
Number of pupils excluded from school	39
Number of physical examinations (male)	78
Number of physical examinations (female)	87
Total number of physical examinations	115
Number of pupils found defective.....	84

DISEASES DISCOVERED DURING YEAR BY MEDICAL
INSPECTOR OF DISTRICT NO. 1

Skin diseases	767
Tuberculosis	1
Eye diseases	1
Ring worm	1
Vermic	1
Ear diseases	2
Tonsilitis	1
Bitten by dog	1
Other diseases	147
 Total	1,018
 Number of vaccinations made at the schools	704
Number of pupils advised to seek treatment	1,670
Number of classrooms inspected	2,115
Number of classrooms disinfected	1

Second District Dr. H. G. McBride, 248 Mulberry Street

St. Columba's School, 38 Pennsylvania Avenue	730 pupils
St. Bridget's School, 404 Plane Street	100 "
St. Mary's School, 119 William Street	100 "
St. Phillip's School, 5 Clinton Street	100 "
St. James' School, 33 Mulberry Street	144
St. Patrick's School, 7 Clinton Avenue	100 "
 Total	1,000

REPORT OF MEDICAL INSPECTION OF PUBLIC AND
SCHOOLS OF DISTRICT NO. 2 (CONT'D.)

Number of schools visited daily	1
Number of school days during year	1
Total number of visits during year	1,102
Number of pupils examined (male)	117
Number of pupils examined (female)	111

Total number of pupils examined.....	420
Number of pupils excluded from school.....	27
Number of physical examinations (male).....	113
Number of physical examinations (female)	20
Total number of physical examinations.....	133
Number of pupils found defective.....	9

DISEASES DISCOVERED DURING YEAR BY MEDICAL
INSPECTOR OF DISTRICT NO. 2

Mumps	1
Skin diseases	70
St. Vitus dance.....	3
Chicken pox	4
Fye diseases	24
Ring worm	1
Vermur	4
Ear diseases	18
Tonsilitis	20
Bitten by dog	1
Other diseases.....	158

Total..... 301

Number of vaccinations made at the schools.....	240
Number of pupils advised to seek treatment.....	251
Number of classrooms inspected.....	221
Number of classrooms disinfected.....	1

Third District—Dr. M. J. Coffey, 216 Bank Street.

St. Michael's School, 172 Belleville Avenue	503 pupils
St. Lucy's School, Amity Place	200 "
St. Augustine's School, Jay Street	275 "
Sacred Heart School, 88 Sixth Avenue	200
St. Rose of Lima School, 546 Orange Street.....	40
Our Lady of Good Counsel School, 18 Heller Park W.M.....	150 "
Total.....	2,088

**REPORT OF MEDICAL INSPECTION OF PAROCHIAL
SCHOOLS OF DISTRICT NO. 3, FOR 1915**

Number of schools visited daily.....	.....	6
Number of school days during year..	.....	187
Total number of visits during year....	.....	1,122
Number of pupils examined (male) .....	.....	5,583
Number of pupils examined (female) .....	.....	4,946
Total number of pupils examined ....	.....	10,529
Number of pupils excluded from school .....	.....	296
Number of physical examinations (male) .....	.....	1,612
Number of physical examinations (female) .....	.....	1,364
Total number of physical examinations .....	.....	2,976
Number of pupils found defective.....	.....	311

**DISEASES DISCOVERED DURING YEAR BY MEDICAL
INSPECTOR OF DISTRICT NO. 3**

Mumps .....	.....	1
Skin diseases .....	.....	62
Scabies .....	.....	4
Whooping cough .....	.....	1
Tuberculosis .....	.....	1
Eye diseases .....	.....	70
Ring worm .....	.....	31
Vermian .....	.....	26
Ear Diseases .....	.....	20
Tonsilitis .....	.....	37
Other diseases .....	.....	65
 Total .....	.....	318
 Number of vaccinations made at the schools .....	.....	396
Number of pupils advised to seek treatment.....	.....	398
Number of class-rooms inspected .....	.....	280
Number of cultures taken.....	.....	3

Fourth District—Dr. P. J. Clark, 215 South Tenth Street.		
St Joseph's School, 168 Hudson Street	1,348 pupils	
St Antoninus' School, 319 South Ninth Street	550 "	
Sacred Heart School, 1049 South Orange Avenue..	226 "	
 Total .....	.....	2,124 "

REPORT OF MEDICAL INSPECTION OF PAROCHIAL
SCHOOLS OF DISTRICT NO 4 FOR 1915

Number of schools visited daily	3
Number of school days during year	189
Total number of school days during year	567
Number of pupils examined (male)	215
Number of pupils examined (female)	109
Total number of pupils examined	324
Number of pupils excluded from school	0
Number of physical examinations (male)	73
Number of physical examinations (female)	25
Total number of physical examinations	98
Number of pupils found defective	"

DISEASES DISCOVERED DURING YEAR BY MEDICAL
INSPECTOR OF DISTRICT NO. 4.

Skin diseases	84
Eye diseases	3
Ring worm	21
Vermic	11
Ear diseases	16
Tonsilitis	61
Other diseases	125
 Total	321
 Number of vaccinations made at the schools	56
Number of pupils advised to seek treatment	3,7
Number of class-rooms inspected	2,168

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Fifth District Dr. D. R. Campbell, 550 Bergen Street.

St Stanislaus' School, 120 Livingston Street	520 pupils
* Peter's School, 24 Livingston Street	600 "
* Ann's School, 380 South Seventh Street	41 "
* Charles Borromeo's School, 92 Custer Avenue	734
 Total	, 854 "

**REPORT OF MEDICAL INSPECTION OF PAROCHIAL
SCHOOLS OF DISTRICT NO. 5 FOR 1915**

Number of schools visited daily	4
Number of school days during year	-
Total number of school days during year	-
Number of pupils examined (male)	-
Number of pupils examined (female)	-
Total number of pupils examined	-
Number of pupils excluded from school	-
Number of physical examinations male	-
Number of physical examinations female	-
Total number of physical examinations	-
Number of pupils found defective	-

SCHOOLS VISITED DURING YEAR BY MEDICAL INSPECTOR OF DISTRICT NO. 5

Ringwood	-
Vernon	-
Fordham	-
Tootsietown	-
Other towns	-

Number of vaccinations made at the schools	-
Number of pupils advised to seek treatment	-
Number of classrooms inspected	-

ANNUAL REPORT
OF THE
METEOROLOGIST

ANNUAL REPORT
OF THE
METEOROLOGIST

Charles V. Croster, M. D., D. P. H., Health Officer, Board of Health, Newark, N. J.:

DEAR SIR:—I herewith submit the following meteorological report for the year 1915.

JANUARY WEATHER

The New Year opened bright, cold and clear. The second day, however, was cloudy, cold and marked by snow flurries. Then there came several days of clear weather, followed by rain on January 5 and 6, with high westerly winds on January 7. Four clear, mild days preceded the very wet January 12 and 13, on which days a total of 3.62 inches of rain fell and the wind blew in an easterly and north easterly direction at times at the rate of 24 miles per hour. It rained on January 15, 17, 18, 23, 24, 25 and 31. It snowed on January 22, 25 and 31. The total rainfall for the month was 8.10 inches; the snowfall 3.55 inches. A large lunar halo occurred on January 30. There were 13 days in January on which it either rained or snowed.

FEBRUARY A DRY MONTH

A rainy and sleety day ushered in February. This was followed by snow on February 2 and 3, the only heavy snowy days of the month. In fact, barring the first three days of February, the month was rather dry, the total

precipitation being 416 inches of rain and melted snow, which was nearly normal. The total snowfall was 325 inches. Candlemas Day was cold and cloudy. Lincoln's Birthday was mild and cloudy, while Washington's Birthday was a very fine, mild day. Heavy fogs occurred on February 23 and 24. Bright lunar halos shown on the nights of February 27 and 28.

MARCH RAINFALL BELOW NORMAL

March began clear and cold, but developed a thirty mile per hour northwesterly air movement and for the first three days did some blowing. On March 6 there started the second heavy snowfall of the winter, 82 inches of snow fell, followed by 50 inches on March 7. Then the days were practically clear till March 22, on which day a gentle rain fell. St. Patrick's Day was particularly mild and agreeable. The total snowfall for March was 11 inches. The rainfall was far below normal, being only 90 inches. Lunar halos were noted on March 23 and March 29.

APRIL A VARIABLE MONTH

April opened cloudy and cold. Good Friday, April 2, partly cloudy and mild. On April 3 began the heavy snowfall of the year, 15.75 inches. In places, drifts over 28 inches high formed. This was the last snowfall of the season. Easter Sunday, April 4, was mild and clear. Easter Monday, cloudy and mild. The latter part of the month from April 23 to the end was foggy mornings, with light fog often during the day. On April 25 the thermometer reached 62 degrees, and on April 27 made the record sprint of 94 degrees. After that the temperature settled down to normal. The first thunder and lightning storm of the season came on April 11, the second on April 26, the third on April 27. A small lunar halo was seen on April 23. The total rainfall was only 3.11 inches. This was below normal.

MAY WITH HIGH WINDS

Three more or less mild, cloudy days ushered in May. Fourteen days had some rain, which, on May 8, 21 and 22 was accompanied with thunder and lightning. On May 20 the wind during a storm blew at the rate of fifty miles per hour and on May 26 at forty-five miles per hour. About 11:30 A. M. on May 20 there appeared a solar halo of great beauty. Memorial Day, May 30, was mild and cloudy. Only 3.28 inches of rain fell during the month.

JUNE HAS A HAILSTORM

June began with a clear, warm day. A sixty miles per hour easterly wind developed on June 2. After a more or less continued blustery day June 3, too, was rather March like in general character. No precipitation occurred until June 7. On June 14, 93 degrees, the high temperature of the month, was reached. The night of June 8 was marked by a heavy fog. Light fogs and hazes occurred on June 8, 18 and 19. Thunderstorms came on June 11, 15, 16 and 17. June 27 was further interesting because of the fall of hail during the rainstorm, as well as because of the rise of the temperature to 83 degrees and its fall after the close of the storm to 64 degrees. 3.61 inches of rain fell during the June storms.

JULY LESS THAN THE AVERAGE SUNSHINE

July began with rain and had fourteen days on which it rained. Only about 50 per cent average sunshine per day was the record. The highest temperature of the month, 95 degrees, occurred on July 31. The Fourth of July was cloudy, close and rather muggy. There were thunderstorms on July 8, 13, 17 and 27. High winds marked July 2, 8, 17, 19 and 29. The average temperature was 73.3 degrees for the month.

AUGUST HIGH WINDS AND RAIN

August began as did July with haze and rain. The rain came at intervals for the first four days, becoming heavy enough, with the downfall of 4 16 inches on the fourth, to stop traffic and with a forty-mile per hour "north-easter" to do considerable property damage. High winds came with the thunderstorm of July 6. On the night of August 20 a beautiful halo shown about the moon. The month closed with a clear, mild day. 7 97 inches of rain had been precipitated.

SEPTEMBER WITH LITTLE RAIN AND HIGH WINDS

September began with a cloudy, cool day. Comparatively little rain fell during the month, 3.01 inches being the total fall. On September 21st storm the wind blew 45 miles per hour. It did the same on September 26. On September 20 and 27 it blew at the rate of 30 miles per hour. The highest temperature of the month, 93 degrees, came on the ninth, the lowest, 45 degrees, on September 23, 28 and 29. Labor Day, September 7, had a little drizzle in the morning, but the day became clear after noon.

OCTOBER, HIGH WINDS

October, though starting with a rainy day, had 2.81 inches of rainfall. This was below normal. On only eight of its days was there any precipitation. Columbus Day, October 12, was a mild, clear day. On October 23 the wind blew in a northerly direction about midnight with a velocity of 45 miles per hour. October 30 was a day with high winds, the wind blowing northerly about 1 45 to 2 45 P. M. at the rate of 50 miles per hour. Hallowe'en, October 31, was mild and clear.

NOVEMBER RAINFALL BELOW NORMAL.

November came in clear, with high northwesterly winds. This month, too, was marked by its below-normal precipitation of 1.48 inches of rain. Election Day, November 2, was clear and mild. High winds blew on eleven days of the month. A lunar halo shown on November 20. Thanksgiving Day, November 25, was a fine, cool day. The first frost came on November 7. The month closed with a clear day. The highest temperature, 70 degrees, was noted on November 1; the lowest, 29 degrees, on November 18, 23 and 30.

DECEMBER ANOTHER DRY MONTH.

December 1 was a cloudy day. The first snowfall of the winter fell on December 2. Another snow came on December 8. The first heavy snowfall began on December 13 and continued until 7 A. M., December 14. Nine inches fell during this storm. On December 12 there was skating at Verona and on Crystal Lake. Large lunar halos were observed on December 16 and 20 and a small one on December 22. Despite the total snowfall of 11.45 inches, the total precipitation in inches of rain and melted snow, 3.56 inches, was below normal.

The high temperature was 54 degrees on December 25, the low, 17 degrees, on December 31.

Appended to this report, you will find a set of meteorological statistics for the year 1915 and comparisons with the statistics of other years.

Respectfully submitted,

WILLIAM WIENER,

Meteorologist.

CHARACTER OF THE DAYS IN 1915

MONTH	Clear Cloud less	Partly Cloudy (Fair)	Cloudy Sun less	Days	
				in which	precip- ta- tion occurred
January			1	17	13
February				13	8
March	0			8	3
April	1			12	12
May	1	2	9	14	
June			12	10	
July	8	1	2	15	
August				15	
September	1		6	7	
October	11	2	14	9	
November	11	2	14	8	
December	8		11	9	
Totals	96	112	17	12	

EXCELDINGLY COLD OR HOT DAYS

MONTH	Average number when tempera- ture fell below freezing, 32 degrees Fahr		Average number when tempera- ture rose to 90 degrees or above	
	1892	1915	1892	1915
January	1		May	1
February	1		June	3
March	1		July	6
April	1		August	3
October			September	1
November	8		October	1
December	20	28		
Totals	96	112	Totals	11
				12

PRECIPITATION (IN INCHES)

MONTH	Rain and Melted Snow			Total Snow Unmelted		
	Period 1843-92	Period 1892-15	Year 1893	Period Snow	Year Snow	Year 1893
January	0	0	8.1	7	2	2
February	0	0	4	4	0	0
March	8	8	7	9	0	0
April	12.8	12	12	12	4	5
May	19	8	8	11	0	0
June	12.8	12	11	11	0	0
July	17.7	17.7	17.7	17.7	0	0
August	17.7	17.7	17.7	17.7	0	0
September	12.8	12	12	12	0	0
October	12.8	12	12	12	0	0
November	12.8	12	12	12	0	0
December	12.8	12	12	12	0	0
Totals	144	144	146.36	144	0	0

NOTE.—One inch of melted snow averages one-tenth of an inch of rain.

TEMPERATURE CHART IN FAHRENHEIT DEGREES

MONTH	Mean Temperature (monthly)			Max. temp. Recorded		Min. temp. Recorded	
	1843	1892	1915	1843	1915	1843	1915
	to	to	1915	to	1915	to	1915
January	3	3	4	6	7	0	0
February	4	27	4	6	8	0	0
March	8	43	5	83	90	5	13
April	11	47	15	31	34	22	28
May	15	51	19	37	50	1	1
June	19	53	22	39	45	5	5
July	21	71	27	42	47	10	17
August	22	72	70	38	43	0	11
September	23	69	1	38	4	1	3
October	23	51	6	39	8	27	0
November	15	45	10	16	1	10	23
December	8	32	6	6	6	0	0

NOTE—Lowest temperature of the year—1° F. January 1843; highest temperature of the year—70° F. July 1, 1892; Altitude, mean 1843 18.2° 53° Annual mean, 1892 1915 41° Annual mean 1915.

MISCELLANEOUS INCIDENTS OF YEAR 1915

MONTH	BAROMETER			Average Direction of Wind	Humid- ity at 12 M.	Per Cent of Sunshine
	Highest	Lowest	Mean			
January	30.15	29.0	29.13	North	67	17
February	30.0	29.70	29.81	North	62	51
March	30.0	29.44	29.49	North	64	65
April	30.0	29.62	29.63	Northwest	66	60
May	30.25	29.33	29.52	North	66	46
June	30.0	29.4	29.8	Northeast	62	51
July	30.08	29.78	29.88	North	69	59
August	30.20	29.74	29.97	Northwest	70	49
September	30.35	29.69	30.02	North	65	69
October	30.47	29.80	30.1	West	68	57
November	30.48	29.25	29.87	Northwest	65	47
December	30.45	29.20	29.83	Northwest	68	41

NOTE Annual mean barometer, 29.95. Prevailing direction of the wind north. Highest barometer recorded for 1915, November 18. Lowest barometer recorded for 1915, December 26.



ANNUAL REPORT
OF THE
Bureau of Child Hygiene

ANNUAL REPORT
OF THE
BUREAU OF CHILD HYGIENE
DEPARTMENT OF HEALTH

Dr. Charles V. Craster, Health Officer, Department of Health, Plane and William Streets, Newark, N. J.

DEAR SIR:—I herewith present the report of the Bureau of Child Hygiene for the year 1915.

Respectfully submitted,

JULIUS LEVY, M. D.,
Director

ORGANIZATION

BUREAU ESTABLISHED AUGUST, 1913

	1914	1915
Appropriation .	\$6,000	\$10,000. \$299.31 extra
Staff	1 Director	1 Director
	1 Secretary	1 Secretary
	1 Clinic Physician	3 Clinic Physicians
	3 Teachers of Infant	9 Teachers of Infant
	Hygiene	Hygiene
		1 Supervisor of Midwifery
		and Boarding Homes

ACTIVITIES

Present

- 1 *Pre-natal care of expectant mothers
- 2 *Supervision for one year of babies delivered by midwives and in wards of hospitals
- 3 *Little Mothers League at each school.
- 4 Nine consultation stations with 18 conferences each week in schools
- 5 Supervision of midwives
- 6 Supervision and licensing of boarding homes for infants
- 7 Supervision of Day Nurseries
- 8 Wet nurses' directory
- 9 Prevention and supervision of ophthalmia neonatorum bacteriological examinations are made of all purulent discharges among supervised babies
- 10 Detection and curing of hereditary syphilis. Wassermann and Noguchi tests made in all cases of malnutrition among supervised babies
- 11 Housing Sanitation Poverty Unmarried mother problem., reports made and taken up with various departments, City and private

For 1916

- 1 Extend supervision of children to school age
- 2 Establish convalescent home for mothers
- 3 Establish obstetrical out patient department.
- 4 Establish Municipal School of Midwifery
- 5 Establish children's dispensaries in congested neighborhoods

Future

Extend present activities and units to entire City.

* Limited to wards 1st, 3rd, 7th and 15th (1/4 of total Births of City).

BUDGET, 1915

Cost of Supervision—\$4.00 per baby

Personal Services

1 Director	\$1,450.00
1 Secretary	720.00
9 Teachers	4,444.44
1 Supervisor of midwifery	490.00
3 Clinic Physicians	709.11
	\$ 7,813.55

Supplies—

Stationery, records, etc..	\$ 431.33
Literature	33.00
Exhibit	1.50
Equipment	1,144.11
	1,823.33

Fixed Charges—

Telephone	\$ 75.90
Rent—Office	1,875.00
Rent—Consultation station	75.00
	410.82

Contingency

Petty Cash Telephone, carfare, small merchandise	121.71
Total	\$1,365.41

STATISTICAL SUMMARY

	1915	1914
Infant Mortality Rate in the City of Newark	85.3	98.3
Deaths under one year	935	1,122

This is a percentage reduction of 13%; if the rate of 1914 had continued in 1915 Newark would have lost **154 babies** more than it did this year.

Infant mortality rates in wards where the babies were supervised by the Bureau of Child Hygiene

Wards	1915	1914
1	72	88
3	73	80
4	88	145
5	89	102

Supervision began in August, 1915.

For Comparison Infant Mortality Rates in the eight largest Cities of the United States from whom we have been able to receive reports for 1915.

Cities	Infant Mortality Rate	Cities	Infant Mortality Rate
St. Louis	82.07	Buffalo	108.2
New York	98.2	Chicago	114.3
Boston	104	Cleveland	115
Detroit	104.6	Baltimore	118

Infant mortality rates in wards of city not supervised:

Wards	Much Higher	Very Little	Lower	Much Lower	
	Infant Mortality Rate	Wards	Infant Mortality Rate	Wards	Infant Mortality Rate
3	16.11	8	71.1	16	54.0
4	11.44		68.6	11.	40.6
5	11.4	1	69.1		
6	16.51				
7	11.11				

Wards 1 and 3—Congested, foreign born

Wards 8 and 9—Residential, native born

Ward 13—Mostly two family houses

DEATH RATE AMONG BABIES SUPER
VISIED BY BUREAU OF CHILD HYGIENE

Death rate among babies supervised by Bureau of Child Hygiene, 10.3

This is based on deaths occurring after our first visit, which was usually after the second week of birth, and should not be contrasted with the city's rate

ONE BABY TO EACH BOARDING HOME AND MOTHER
Only One Baby Under One Year Allowed to Each Boarding Home



BABIES SUPERVISED

Forward from 1914	675
Births in 1915	147
Deaths	2
	1914
Nurses' visits to Homes	14,247
Mothers' visits to Consultation Stations	5,247
Expectant mothers receiving pre natal care	390
Members of Little Mothers' Leagues	240
Midwives supervised	100
Boarding Homes for Infants	
Licenses granted	40
Number of boarded-out infants under supervision	32
Number inspected	110
Ophthalmia Neonatorum	
Number of cases supervised	9

The infant born in our most congested but supervised, Wards 1 and 3, has as good a chance to survive the first year of life as the one born in our finest and richest residential section (Ward 8).



DEATHS UNDER ONE YEAR

YEAR			Still Births
	Under One Year	Under One Month	
1915	446	390	567
1911	1417	459	450

YEAR			Still Births
	Under One Year	Under One Month	
1911	87	1	-
1910	88	11	-

YEAR	Proportion of deaths under one year occurring at ages under one month		City centre ages under one month	
	Proportion of total deaths			
	in year occurring at ages under one month	ages under one month		
1915	44%	16.84		
1911	40%	19.1		

From 1901 to 1905 the *deaths under one year* represented 20.60 of the total deaths; from 1906 to 1910 this proportion increased to 21.0; from 1911 to 1913 decreased to 19.73 and in 1915 it decreased to 16.98.

There has been a marked reduction in the actual number of deaths under one year, in the infant mortality rate for 1915 and in the proportion of total deaths in the City occurring at ages under one year. Only a slight reduction has occurred in the number of deaths under one month, without any reduction in the actual rate, since there were fewer

births in 1915. There has been an increase in the number of still births and in the rate for still births per thousand living births.

One hundred and eighty seven fewer babies died in 1915 than in 1914, and the reduction in infant mortality rate represents a saving of 13% in the rate. This saving of life under one year has been effected by the prevention of sickness and death in the age group over one month, while no reduction has taken place in the age group under one month and an actual increase has occurred in the still births.

DEATHS UNDER ONE MONTH. Prematurity and congenital debility are given as the cause of death in a little less than

1/2 of all the deaths under one month. In 1914, injuries at birth were given as the cause of 29 deaths, while in 1915 in 14 instances. It is not at all unlikely that our supervision of midwifery practice and our impressing upon the midwives the importance of calling a physician promptly in all difficult cases, has contributed to this result.

These figures bear out our contention that while the education and supervision of mother and baby has accomplished much for the City, and will accomplish even more as it is extended to the entire City, we must give more attention to pre natal and obstetrical care if we would prevent the large number of still births and deaths under one month. This phase of the work will probably be the main activity in the year 1916.

SEASONS.

The greatest number of deaths under one year in any one month occurred in August. While more deaths occurred in July than in June, the number was less than in April and only a little more than in January and October. In 1915 the deaths under one year in the month of July

were 88, while in 1914 they numbered 129. All months show a death rate 15, except January and April. While intense heat and humidity undoubtedly affect infant mortality, it would seem from our experience that preventive hygiene methods can neutralize these factors. It should not be forgotten that the cold months of the year have an equally harmful effect on the immature and premature infants and increase deaths under one month.

CAUSES OF DEATH UNDER ONE YEAR

DIAGNOSIS. It is not safe to deduce too much from given causes of death under one year, especially of those under one month of age, as can be gathered from some of the questionable diagnoses given below, which are transcripts of records received at the City Clerk's office, viz:

Age	Diagnoses	Age	Diagnoses
2 hours	Uterine hemorrhage	2 days	Meningitis
4 hours	No cause of death	2 days	Pneumonia
1 day	Acute gastritis	2 days	Encephalitis
1 day	Acute gastritis	4 days	Gastro enteritis
1 day	Pneumonia	4 days	Cerebro spinal meningitis
1 day	Inanition	14 days	Acute endocarditis
1½ days	Invisibility	1 mo 20 days	Endocarditis
2 days	Marasmus	10 months	Inanition
2 days	Probably heart trouble	11 mo 22 days	Pernicious anaemia
2 days	Congenital myocarditis		Infantile paralysis from birth
			No cause of death

IMPERFECT RECORDS. Two records represented that the infants were two hours old at death when, as a matter of fact, both were still born.

1 Record gave no age

1 Record gave the date of birth as the age at death.

SYPHILIS Syphilis was given as the cause of death for 14 infants that died under 1 year of age in 1914, and for 17 in 1915. Since the total number of deaths from all causes is smaller in 1915 than in 1914, this shows a relative increase. When we recall that according to a careful analysis of still births by autopsy at the Johns Hopkins Hospital, 26% were due to syphilis, we feel safe in saying that syphilis is more frequently the cause of death in infants under one month of age than would appear from the certificates.

GASTRO-INTESTINAL DISEASE In 1914 acute gastro intestinal diseases appeared 310 times, while in 1915 it appeared 204 times as the cause of death. This marked reduction is largely due to the great increase in maternal nursing in this City, not only among babies under our supervision, but also in private practice.

CONTAGIOUS DISEASES Measles and whooping cough were given as the cause of 23 deaths in 1914, against 18 in 1915, while only one death was due to scarlet fever and 3 to diphtheria in 1915. These figures clearly show the need for more effective methods of prevention and care of these so called minor diseases, particularly in the congested neighborhoods. Hospital facilities are required for the severe complicated cases of measles and whooping cough and more adequate medical supervision for the ordinary cases.

DISEASES OF THE RESPIRATORY SYSTEM In 1914 there were 27 deaths under one year that were ascribed to respiratory diseases, while in 1915 there were only 13.

This is a remarkable reduction during a year in which there was an epidemic of influenza and measles and an increase in the number of deaths from pneumonia among adults. Maternal nursing better, hygiene management, improved nutrition and increased resistance may explain this saving of infant life.

INFANT MORTALITY RATES

The infant mortality rate in the City of Newark for the year 1915 was 85.3 per thousand births, the lowest ever recorded in this City. In 1915 the deaths under one year were 16.8 of the total deaths of the City, while in 1914 they were 19.8%. In most cities the deaths under one year are one-fifth of the total deaths. The infant mortality rate in New York City for 1914 was 94.6, while that of Newark was 98. In 1915 the infant mortality rate of New York City was 98.2, while that of Newark was 85.3.

While a comparison with the large cities of the country or the record of our City for the past five years is rather encouraging, we believe that it is possible to bring the infant mortality rate much lower.

INFANT MORTALITY RATES IN EIGHT LARGEST CITIES OF THE UNITED STATES FROM WHOM WE HAVE RECEIVED FIGURES FOR 1915

Cities	Rate	Cities	Rate
St. Louis	82.07	Buffalo	108.2
New York	98.2	Chicago	114.3
Boston	104.	Cleveland	115.2
etc. etc.	104.6	Baltimore	119.8

NEWARK, 1910-1915

Year	Deaths under One Year	Infant
		Mortality Rate
1910	1,232	123
1911	1,062	113
1912	1,103	103
1913	999	93
1914	1,122	98
1915	935	85.3

INFANT MORTALITY RATES BY ATTENDANT AT BIRTH

ATTENDANT	Births	Number of Deaths		Infant Mortality Rate	
		Under One Year	Under One Month	Under One Year	Under One Month
Total	10,950	130	1	8	1
Midwife	5,414	14	1	78*	11
Physician	4,243	—	—	94	0
Hospital	1,295	11	0	88	1

In considering this table, which shows that the infant mortality rate among babies under one month is more than twice as high among those delivered in hospitals than those delivered by midwives and 50% higher among those delivered by physicians than those delivered by midwives, it must be studied more from the view point of the kind of mothers and character of cases attended, than the kind of work done by the different kind of attendants. The hospitals receive a greater proportion of difficult and protracted labors and naturally in this group of cases a higher mortality occurs in the babies in the first days. Likewise, the physicians are called in to attend cases that require surgical interference and here also there is a higher mortality in the first days of infant life. It is also true that the mothers confined by the midwives are mostly foreign born and recent immigrants who live more physiological lives and give birth to more vigorous infants. After these points have been given proper consideration it may be pointed out that the death rate of infants, particularly under one month, is considerably lower among those attended by midwives than those attended by hospitals or physicians.

INFANT MORTALITY AND NATIVITY OF MOTHER

Nativity	Infant Mortality		Nativity	Infant Mortality	
	1915	1914		1915	1914
United States...	91.3	111	Germany	82.4*	
White	87.0		Russia	78.6	63
Colored	162.7		Italy	71.0	88
Ireland	86.7*		England	56.0*	
Austria	82.8*	131			

* Rates made from small numbers

There has been a considerable reduction in the infant mortality rate in all groups, except Russia, but even in this group it is lower than the City's rate.

Since our work was carried on in wards occupied principally by Russian, Austrian and Italian mothers this table shows more what can be accomplished than the normal rate of the different classes of mothers. It is worthy to note that the infant mortality rate among native born mothers is much higher than among foreign born mothers. It should be noted that this does not mean only native born mothers of native parentage, but infants of all mothers born in the United States.

It is interesting to consider the high infant mortality among the native born and Austrian mothers in connection with the high illegitimate rate found in these two groups. The high illegitimate rate only slightly increases the infant mortality rate and should be taken together with the high infant mortality rate as indicating social, moral, economic, environmental and housing conditions that are unimical to a normal moral life for the mother or a healthy physical existence for the baby.

LATE REPORTED BIRTHS FOR 1915

During the winter months we find a great number of deaths occurring in the first weeks of life among immature, premature and feeble babies which might be prevented if these births are promptly reported. The prompt reporting of all births is of such great value to us because we depend upon these records to enable our nurses to visit new born babies within the first two weeks of life, the most critical period in the first month. That is why we are so interested in having all births recorded and reported at least within five days, as required by law. Our Department will not, however, be able to prevent as many of these deaths as we should until we receive notification of births within twenty-four hours after birth. This practice is followed in England and can be easily established here, especially among the midwives who deliver the babies that we visit, merely by supplying them with an addressed postal card on which they can notify the Board of Health within twenty-four hours of a birth. In this preliminary notification they should be requested to state only the address and the name of the family.

UNREPORTED BIRTHS

It is a great satisfaction to be able to report a considerable reduction in the number of unreported births, particularly among the midwives. While it is proper to claim that there is no justifiable reason for any births to be unreported, we feel that the midwives are to be complimented on the fact that out of 5,414 births delivered by them only 29 were not reported. The improvement in this phase of midwifery practice can be gauged by the fact that in the early part of 1915 one midwife was charged with nine late birth returns and that since then she has not only reported all her births, but reported them within the five-day limit.

The number of unreported births discovered only represent those that we were able to find by looking for the birth record of all babies that died under the age of one year, so that undoubtedly there are more unreported births than we have included in our statement. Just how many more there are is difficult to say, but from the fact that a large proportion of the unreported births discovered were of babies that died on the first day, we feel justified in believing that the proportion of unreported living births in the City of Newark is surely less than 10%, and probably not more than 5% of the total births.

BIRTHS.

In 1915 the birth rate was 29.2 on the basis of 375,000, total population. There were 152 fewer births in 1915 than in 1914. This reduction in the birth rate began in May and continued throughout the year. There was a great difference in the number of births in the different months, which should be taken into consideration when comparing the rates in the different months, or the deaths under one month and the still births. In determining the relation between seasons and infant deaths these facts should be considered.

WARDS. An increase in the number of births occurred in Wards 3, 5, 7, 8, 9, 10 and 12.

NATIVITY OF MOTHER. There was a decrease in births for all groups of mothers except those listed under Russian and Others. The proportion of total births attended by midwives is the same as in 1914. The proportion of women attended by midwives among Irish, Italian and native born mothers has slightly increased, while a slight decrease has been noted among the English, German and Russian mothers.

The number and proportion of births delivered in hospitals in 1915 was slightly greater than in 1914—11.8% in 1915 and 11.5% in 1914.

Physicians attended in homes 38.87 of the total births.

That the number patronizing hospitals is not determined by the hospital facilities, by the degree of poverty or the kind of obstetrical care obtainable is indicated by an analysis of the Italian group of mothers who are almost exclusively attended by midwives and are delivered in the most congested quarters and often under the most difficult circumstances.

Illegitimacy. The number of illegitimate births in 1915 is exactly the same as in 1914, giving a slight increase in the rate, as there were fewer births in 1915 than in 1914.

Year	Illegitimate	
	Births	Rate
1914	15	13.8
1915	17.2	13.6

An increase has occurred in the number of illegitimate births of native born and Austrian mothers. The highest illegitimate rate is found among the colored, *i. e.*, 89. When we consider the four large groups of white mothers we find the highest rate among the native white, *i. e.*, 19.

Nativity	Number	Rate	Nativity	Number	Rate
United States	104	23.68	Russia	10	6.18
Colored	23	89.14	Italy	7	2.77
White	81	19.59	England	3	2.39
Austria	19	12.42	Others	4	16.66
Germany	3	10.73			
Ireland	2	7.54			

Illegitimate Births by Wards.

Wards	Births		Wards	Births	
	Total	Illegitimate		Total	Illegitimate
First	1,206	13*	Ninth	539	8
Second	259	8	Tenth	810	2
Third	1,293	15	Eleventh	320	3
Fourth	252	9	Twelfth	735	12
Fifth	924	15	Thirteenth ...	837	5
Sixth	416	7	Fourteenth	1,103	8
Seventh	510	17	Fifteenth	345	7
Eighth	520	/	Sixteenth	648	5

* Florence Crittenten Home

The largest number of illegitimate births occur in the 3rd, 5th, 7th and 12th Wards. The 1st Ward is not included, as the Florence Crittenten Home is located in this ward and receives unmarried mothers from all parts of the city.

When we contrast the total number of illegitimate births in the several wards with the total number of births in these wards the 2nd and 4th stand out very prominently as having an extremely high illegitimate rate.

Wards	Total Births	Illegitimate
		Births
2	259	8
4	252	9

Part of the explanation for this condition can be found in the fact that the two wards contain a large colored population, many furnished room houses, and a large moving population.

Undoubtedly the records do not give the complete number of illegitimate births, as we know it is the practice for many unmarried mothers to deny this fact. The problems

associated with this class of mothers are manifold and complex and affect the community in many ways. Their babies often become a charge to the City, requiring dispensary, hospital or other institutional care; the mothers, from economic necessity, take up work before they are physically fit and again become a charge to the City either through the dispensaries, hospitals or other institutions.

This group of women is also easily affected by the demoralizing influences of the City and easily are added to the number that spread syphilis and gonorrhoea.

We have found a sufficient number mentally backward, defective and feeble minded to justify a psychological examination of all dependent unmarried mothers. It seems to us, therefore, that it would be of the greatest value to our community to assign a social worker to look after the dependent unmarried mothers and their babies for the purpose of removing the feeble-minded from society and of placing the rest under such physical and moral environment that their welfare, physical and moral, may be safeguarded. The cost would be as nothing in comparison with the immense amount of disease, suffering and misery that could be prevented.

*Congestion and Average Income of 100 Typical Families of Babies
Supervised*

No. of families living in—	Wards		
	Ward 1	Ward 3	7 and 15
2-family houses	9	23	23
3-family houses	3	21	29
6-family houses	5	15	17
8-family houses	2	3	2
10 family houses	3	0	1
12 and more families per house...	28	4	12
No. of persons per room	2.3	1.3	1.3
Average size of family... .	6.2	4.4	5.6
No. of families living in 2 rooms. . .	42	16	8
No. of families with more than—			
2 persons per room..... .	31	15	17
3 persons per room..... .	19	2	7
4 persons per room..... .	4	1	0
5 persons per room.	1	0	0
No. of families having—			
5 persons	16	23	17
6 persons..... .	21	9	7
7 persons..... .	7	7	12
8 persons..... .	13	4	10
9 persons..... .	3	3	5
10 persons	3	0	4

Average Yearly Income

Average wage per family	\$421	\$557	\$568
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This table was prepared by analyzing our reports of 100 families of supervised babies in the respective wards. The 7th and 15th Wards were grouped together because they adjoin each other and because we did not have a sufficient number of records from each ward separately.

The infant mortality rates in the 1st Ward and 3rd Ward are almost identical, and still there is a very marked difference in the housing and economic conditions of these two wards. The 8th Ward, not supervised, with a similar infant mortality rate, is probably our finest residential section.

It is interesting to note, for instance, that in the 1st Ward among 100 consecutively supervised babies we find only 1% living in two-family houses, while in the 3rd, 7th and 15th Wards, 23%; that in the 1st Ward 28% of the families were living in houses containing 12 and more families, while in the 3rd Ward only 4% of the families, and in the 7th and 15th Wards 12% were living in such large tenements; one house in the 1st Ward contains 25 families and several 20 families, while in the 3rd Ward 16 is the largest number.

Real congestion and overcrowding is better represented by stating the number of persons per room and the number of persons per family than by giving the number of persons per acre.

Our table shows that in the 1st Ward the average size of the families is 6.2, while of the 3rd Ward it is 4.4 and of the 7th and 15th Wards 5.6; that in the 1st Ward 31% of the families had at least 2 persons per room, 19% at least 3 persons per room, 4% at least 4 persons per room and 1% at least 5 persons per room, while in the 3rd Ward there was no family with 5 persons per room, only 1% with 4 persons per room, 2% with 3 persons per room and 15% with 2 persons per room, and in the 7th and 15th Wards there were no families with either 4 or 5 persons per room, only 2% with 3 persons per room and 17% with 2 persons per room.

The number of babies that were members of large families also throws an interesting light upon the relative conditions of the respective wards and their relation to infant mortality. In the 1st Ward 21% of the families consisted of 6 persons while in the 3rd Ward 4% of the families and in the 7th and 15th Wards 7%. In the 1st Ward 13% of the families consisted of 8 persons, in the 3rd Ward 4% and in the 7th and 15th Wards 10%. In the 1st Ward 3% of the families consisted of 10 persons in the 7th and 15th Wards 4%, and in the 3rd Ward no family had 10 members.

ECONOMIC RELATIONSHIP. Of the 100 families the average yearly (estimated) income in the 1st Ward was \$421, that of the 3rd Ward \$557, and the 7th and 15th Wards \$562.

A study and analysis of these figures proves conclusively, I think, that infant mortality cannot be explained by the economic status of families, size of families, congestion, overcrowding or unsanitary conditions in the neighborhood. Maternal nursing is the one condition that far outweighs all other considerations and where this is maintained infants will survive, no matter what the environmental and social conditions are.

DESCRIPTION OF ACTIVITIES. EDUCATION.

Education has become the basic principle of prevention in Child Hygiene work, just as health is being made the basic condition of education.

TEACHERS OF INFANT HYGIENE. The teachers of infant hygiene, who by frequent visits to the homes of the mothers, by intimate personal contact have succeeded in dislodging the long established prejudices and superstitions and substituting scientific methods in the management of infants in place of the many unreasonable practices found among many groups of mothers, have become the best instruments in this health program. While our nurses have tried to teach mothers all that goes with infant hygiene and the proper care of babies, everything has been subordinated to the one essential practice in the proper management and care of infants, that is, maternal nursing.

EDUCATION IS THE BASIS OF PREVENTIVE HEALTH WORK



LITERATURE. Literature that likewise emphasizes nursing and incidentally discusses other matters in reference to Infant Hygiene has only been used to supplement this direct method of instruction. Leaflets on "Prenatal Care," "Summer Care" and "Winter Care" have been issued in four languages.

CONSULTATION STATIONS. The Consultation Stations, attended by a physician and nurse, have been used largely to intensify the lesson the mother has been learning from the nurse, that practically all women can and must regularly nurse their infants at proper intervals.

EXHIBIT. Our exhibit was prepared to develop these same ideas, and therefore has emphasized maternal nursing above all things and has referred only secondarily to other important elements in the proper management of infants.

We have tried to make a point with our nurses and doctors that their function is not to keep one baby well or alive, but so to teach mothers the principles of maternal nursing and Infant Hygiene that eventually the knowledge they are imparting will become incorporated by the neighborhood into regular practice, so that as the years go on it will become less necessary for professional workers to teach mothers these simple and permanent truths about the care of their own babies. Surely the day ought to arrive when mothers will impart to their daughters the few essential truths in regard to the development, training, management and feeding of babies that a mother needs to know to give her child its fullest opportunity for natural growth and progress.

LITTLE MOTHERS' LEAGUE. Our Little Mothers' Leagues, organized only in the schools in which we have a consultation station, have been used to serve these same purposes. By having each girl visit one baby each week for a period of

six months and then reporting at the meeting what she has seen and noted, our nurses have been given an opportunity to point out to these girls how a breast fed baby is the healthy, happy baby, how regularity and proper feeding intervals add to the comfort and health of both mother and baby, how crying and discontent comes from poor ventilation, overheating, too frequent feeding, insufficient sleep, cold feet, insufficient and excessive clothing. In this way we have not only prompted the mothers of these girls more readily to accept the teaching of our nurses, but have planted in the minds of our coming mothers that there is a right way and a rational system of bringing up infants, and that there are some people, like doctors and nurses, who know of these rational methods, and that when a mother finds that her baby is not getting along properly she should consult a nurse or doctor instead of a meddlesome neighbor.

The value of the Little Mothers' Leagues cannot be overestimated. Work of this kind could well be incorporated into the school curriculum, since it not only furnishes the most useful kind of knowledge, but gives an opportunity to develop in the girl mental processes of observation, reasoning and deduction that in the last analysis are the very purposes of education itself.

PREGNATAL CARE. In the supervision of expectant mothers we have limited our work practically to teaching mothers the importance and value of personal hygiene, of preparing for maternal nursing and of a medical examination during pregnancy if they intend to be delivered by midwives, so that if there is any abnormality or signs of danger proper precautions can be taken.

MATERNAL NURSING

In our report of 1914 we quoted figures from New York and our own experience that demonstrated that maternal nursing was possible in a much greater proportion of cases than some authorities had stated. An analysis of 978 cases ~~already~~ demonstrated that a little supervision and advice considerably increased the number of breast fed. During the year 1915 we have placed even a greater emphasis upon the value, importance and practicability of maternal nursing and are disposed to ascribe to this whatever success we have had in the prevention of infant morbidity and the reduction of infant mortality.

A census of 888 mothers under our care showed that only 12 babies under six months of age were on the bottle, *or less than 1.3%*. A report by Herman Schwartz, of New York, several years ago showed that of 1,500 mothers attending Dr. Hill's Maternity Clinic 77% nursed at six months; in our own series of cases in 1914 79% were nursing at six months. This great increase in the number still nursing at six months has been accomplished, first and foremost, by the accumulative effect of our educational propaganda for maternal nursing upon the mothers in our district, the midwives who attend these women, the hospitals in which a small proportion are confined, the doctors who have seen what can be accomplished in this direction by perseverance, the charity organizations who have accepted our position that nursing shall be permitted to interfere with maternal nursing. If we have accomplished more in this direction than other cities, it is merely because we have had greater faith in its practicability and have shown more zeal in guaranteeing to each infant this fundamental, inalienable right.

As our prenatal work has increased we have been in touch with the mothers even before the birth of the baby and have been able to inculcate our ideas of maternal nursing well in advance. Many babies are unnecessarily weaned or partly put on the bottle in the first weeks of life because the mother's nourishment for the babies does not seem ample. It is at this time that proper advice in technique, diet, encouragement and any assistance that may be needed will save many a baby from being deprived of its proper nourishment.

We have tried systematically to remove all obstacles and difficulties in the way of successful maternal nursing, and with the assistance of the many agencies interested have succeeded to a most encouraging degree.

HOSPITALS We have taken up with the hospitals of this City two practices that, though fairly common in hospitals throughout the country, are wrong in theory and have increased the number of bottle fed. The first is the established idea that hospitals are to concern themselves with the sick only, even though by doing so that may be increasing the number of sick. I refer to the practice of admitting a nursing mother who may need hospital care, but refusing admission to the nursing infant because it is well. Or again, admitting the nursing that requires hospital care, but making no arrangements for the admission of the mother who is to nurse the baby. All the hospitals of the City of Newark have admitted the justice of our position that mother and nursing be admitted together whenever either require hospital care, and all, except a few who are without proper facilities, have adopted this practice.

Another harmful practice of many hospitals is to place on bottles the babies of mothers who request it because the mother states she will have to work after leaving the institution. This applies particularly to the unmarried mother.

and in no other group is this practice so objectionable and harmful. We have taken this matter up with a number of the institutions and have tried to make clear that the function of a hospital was to maintain accepted hygiene and not to solve economic and social difficulties in this fashion, that whenever a mother presents this problem it should be referred to us, in the hope that we will be able to solve the difficulty in a manner that will better conserve the welfare of both mother and baby.

POVERTY. This influences maternal nursing markedly only when it makes it necessary for the mother to supplement the family income by working outside of the home, in a lesser degree by making it difficult to obtain sufficient nourishment for the mother. As a result of active and most helpful co-operation between the charity organizations and our department we feel justified in stating that *no infant under six months of age is being deprived of maternal nursing on account of poverty*. Our nurses have instructions to refer promptly to the charity organizations all cases in which any social or economic difficulty seems to interfere with successful maternal nursing, and it is to a very large degree to be credited to this active co-operation that we have succeeded in attaining so high a rate of maternal nursing.

BREASTS AND NIPPLES. In private practice it is not very unusual to have maternal nursing interfered with on account of cracked and painful nipples, or caked and abscessed breasts. These two conditions have been so rare among our supervised mothers and so promptly helped through the perseverance and close supervision of our nurses whenever they occurred that I feel justified in saying that they can be entirely prevented by proper hygienic measures. This has also kept up the number of breast fed

PROLONGING MATERNAL NURSING. Maternal nursing can be considerably prolonged by supplementary and alternate feeding. Whenever the babies do not seem to make proper progress after two or three weeks of weighing and test feeds, and after we feel sure that the nurses have accomplished all that is possible in regard to the mother's diet, in the housing and environmental conditions, we have supplied one or two supplementary feedings. This has been enough to increase the baby's weight and to keep the mother from worrying that her baby is being starved. Later we increase the supplementary feedings, and, as the time approaches for weaning, place the baby on alternate feedings. This method not only enables us to influence the baby's weight and development, but again demonstrates to the mother and her neighbors the great value we attach to maternal nursing.

WET NURSES. In 1915 we sent out five wet nurses to families in the care of private physicians and have probably saved as many lives in this way, besides giving a home and income to five unmarried mothers and their babies. Believing that every baby that needs maternal nursing is entitled to this service, whether rich or poor, we have made it clear that this is obtainable for whatever price a family can pay. We have placed a number of our very poor babies in the Florence Crittenden Home to be wet nursed without cost.

PUMPED BREAST MILK. We have sent pumped breast milk on request to families of private physicians, even out of town, and have supplied it in a large number of cases to the babies of the very poor neighborhoods without cost. In this way we have saved many lives and have been able later to place the baby back on the mother's nursing.

CONTRA-INDICATIONS TO MATERNAL NURSING

We have maintained the position that every mother should be permitted and encouraged to nurse her baby until it can be determined that such nursing is harmful either to mother or baby. We have taken the view that we know the value of maternal nursing, and as long as there are divergent opinions about the possible effect on the mother and baby of diseased conditions in the mother we would be influenced merely by accepted facts.

TUBERCULOSIS As long as an infant of nursing age is to be allowed to remain with a tuberculous mother, to be cared for and fondled by her, we have held that it was best for the baby also to be nursed by her, believing that the resistance and immunity that it obtains in this way would be most useful to combat the infection.

SYPHILIS. Whenever nursing infants do not progress properly our doctors are instructed to make a Wassermann on the mother and a Noguchi on the baby. In many cases we have found the mothers to be syphilitic. They have been placed under treatment and allowed to continue to nurse their babies. I believe this field of investigation offers some very good opportunity for detecting latent syphilis and of eliminating a great deal of chronic invalidism. We have suggested to the hospitals, particularly the City Hospital, that a Wassermann reaction should be taken of every woman in the maternity ward. This is being done on every woman admitted to the Florence Crittenden Home, where we obtain our wet nurses.

Hereditary syphilis undoubtedly is the cause of a great deal of malnutrition in early life, anemia, debility and retardation, physical and mental, in later life, epilepsy, feeble-mindedness and idiocy. We believe, therefore, that the detection of every case of hereditary syphilis and its proper treatment and care is of inestimable value to the community, and can best be done through the nurses in touch with the babies and the family history.

MIDWIFERY.

When we began the study and supervision of midwifery practice we were familiar with the convictions of many of our best obstetricians that midwifery practice is an anachronism and should be eliminated. This is the natural attitude of those who contrast the kind of work and type of women they see in the poor tenement districts with the work and character of men practicing in our well appointed hospitals. We have been influenced in our views, however, by what we have found and by the thought that we were confronted with a condition and not a theory, with a practice long established and not something to be effected merely by our wishes. We have therefore set ourselves the task of raising midwifery practice to the highest standards possible, without any desire, at the present moment, to decide the question whether the best kind of obstetric service is obtainable in this way.

LICENSE. Our initial investigation in 1915 revealed the fact that of 107 women practicing midwifery 17 were unlicensed and, according to the law of 1910, which required a two year course of training, were ineligible for license. As a result of a careful investigation into the character of the work of the unlicensed midwife we felt justified in recommending that the State Board of Medical Examiners grant them a license if they successfully passed their examination. This was done for the purpose of giving midwives who had been practicing prior to 1910 in the City of Newark without a license, and in our judgment were qualified so to practice, an opportunity to obtain a license from the State Board of Medical Examiners before we enforced our rule that after 1910 no midwife would be allowed to practice without a license.

As a result of the co-operation of the State Board of Medical Examiners these women were allowed to take the examination though they did not conform with all of the educational requirements. Eleven unlicensed midwives took this examination and obtained their diploma. We now have in the City of Newark 100 registered licensed midwives.

During the past year we have warned several women against practicing midwifery without a license and have received their assurance that they will discontinue. One case was so flagrant and produced such dire results that it was referred to the prosecutor's office for action.

EDUCATION. We have taken the view that the midwives were doing many things that they should not do and were leaving undone many things that they should do merely because they did not appreciate their importance or effect. We have tried, therefore, to educate the midwives and befriend them, rather than prosecute or persecute them.

Our Supervisor attended in 1915 17 confinements and followed the post-partum care in 26 cases. At these visits she instructs the midwives in the importance of cleanliness with regard to their own person, hands and bag, of bed and patient and the essential points in maternal nursing and infant care. Our nurses who visit the babies delivered by the midwives have been instructed to report to the Supervisor all cases of improper advice, undue activity, neglect or carelessness. In this way the Supervisor has an opportunity to discuss these matters again with the midwives.

CONFERENCES. Conferences have been held between the Supervisor, our teachers of Infant Hygiene in a small district and the midwives practicing in that particular neighborhood in order to get the midwives to be friendly disposed to the visits made by our nurses and in the hope that by giving them a clear understanding of what our nurses are trying to teach they will give their mothers the same advice.

The nurses have reported that as a result of this method the midwives have helped our educational propaganda on as in the Italian neighborhood, have successfully established a three-hour interval of nursing with many mothers and have gotten rid of the swabbing band before our nurses arrived. They have furthermore, in the spirit of co-operation, called in our nurses whenever they had premature, immature or weak infants or had difficulty in establishing maternal nursing.

LECTURES. During the past summer we established a lecture course for the midwives which prominent physicians in the community kindly agreed to give, but after giving a few of the series they were discontinued because the attendance was so irregular. We feel that the small neighborhood conferences are giving much better results.

LITERATURE. Each midwife has been given a book on regulations and rules, which tells her of the requirements and limits set by the Legislature of the State of New Jersey to her practice and gives her some practical information on the care and feeding of mother and baby.

We have also supplied the midwives with leaflets in four languages on prenatal care, which they have been distributing to their patients.

RESULTS Our initial investigation in 1915 showed that our midwives were guilty of many infractions of the law and of many practices that were dangerous to mother and baby. One midwife had been regularly using hypodermic injections of strychnine, arsenic and iron for any condition that required medical attention during pregnancy; others had been massaging and applying camphor to unmed breasts of mother or baby; a great many did not use silver nitrate in the eyes of new-born babies, and only a few were regularly using thermometers. These things have been changed to a very large extent. Our Supervisor distributes

silver nitrate to every midwife and has stated that, to the best of her knowledge, it is being used in every case by every midwife. Most of the midwives are now carrying thermometers and taking temperatures.

The reporting of births has improved to such a degree that in the year 1915 only 29 unreported births were discovered among midwives, though they attended 5,414 births, and only 82 births were reported late, while among the doctors, though they attended only 4,243 births, 155 were reported late.

A marked change has occurred among the midwives in their attitude towards difficult labors and abnormal signs or symptoms in pregnancy or the puerperium. Heretofore the practice of many was either to ignore these early signs of approaching trouble during pregnancy, labor or puerperium, or to administer some treatment themselves, or at least to delay the calling of a physician as long as possible. We have considerable evidence from our Supervisor, nurses and from disinterested doctors that the midwives are now calling in physicians very much more promptly and much more frequently. Those who know the importance of time in obstetrical problems will appreciate what a great advance this represents.

As a result of the advice and teaching of our Supervisor most midwives are wearing clean, washable materials at confinements, and some are using gowns. Most of them have lined their bags with washable materials and have made washable receptacles for their instruments and materials.

I wish to mention a detail that I think will explain as much as anything what can be accomplished merely by advice and education. Many midwives were using a large bottle of vaseline for anointing their hands before exam-

ination or for any other purpose for which they may employ this lubricant. After we explained to them the danger of carrying these jars from one patient to another, inherent in this practice, they all substituted for it tube vaseline.

Our experience with midwives in Newark shows that they can be taught to report their births promptly and completely, to restrict their practice to normal cases only, to send for physicians promptly whenever there is the least evidence of abnormality, to teach mothers proper care of themselves during pregnancy and of babies during the time they attend

BOARDING OUT OF INFANTS AND CHILDREN.

In July, 1915, the Board of Health passed an ordinance that requires everyone who places out or boards one or more infants under the age of three years, excepting incorporated placing out societies and State Departments, to obtain a license from this Department.

We devised a system of records whereby we would be informed of every baby placed in or removed from any foster home and of such data that would enable us to keep in touch with the mother or parents of such boarded out children.

In issuing licenses to boarding homes we have tried to adhere to the principle of allowing only one baby under one year of age to be boarded in any one foster home and as many older children as we thought could be properly housed and cared for. Each home is visited by our Supervisor at least once a month, the condition of the home and baby carefully noted and such instructions given as are needed for the proper care and feeding of the baby.

BABIES UNNECESSARILY BOARDED OUT. We have tried in every way possible, and in many instances we have succeeded, to prevent the unnecessary boarding out of infants and children. This has been accomplished principally through the assistance of the Florence Crittenden Home, Bureau of Associated Charities and United Hebrew Charities, who have helped couples to maintain their homes intact, unmarried mothers to return to their families or to be placed with their infants in the Florence Crittenden Home, or to devise methods whereby the deserted wife or unmarried mother has been enabled to earn her living and keep her infant with her.

APPLICATIONS. 150 applications were received from women who wished to conduct boarding homes. Of these 40 were from out of town, 110 were investigated, and 40 received licenses; 18 infants under one year of age and 14 infants over one year and under three years have been boarded out under our supervision. One of these died and one was adopted, the remaining are in good condition.

The usual charge of boarding homes is \$10 to \$12 a month.

OPHTHALMIA

In 1915 the prevention and supervision of ophthalmia was assigned to this Bureau.

METHOD. We immediately added the detection of ophthalmia to the work of our infant hygiene nurses and required them to make a smear of every purulent discharge among the babies supervised by this Bureau. As this meant every baby delivered by a midwife or in the wards of a hospital, residing in the wards under our jurisdiction, we were in a position to discover if ophthalmia was at all common in this group of cases and to check up the use of silver nitrate by midwives.

Our nurses have sent to the City Laboratory 31 smears taken from infants with purulent conjunctivitis. Of these 8 were suffering from severe forms of purulent conjunctivitis that otherwise would not have been discovered or reported. Of these one showed the gonococcus and 7 other bacteria

We have looked after 9 cases of gonorrhoeal ophthalmia neonatorum reported to us the latter part of 1915. Of these four were treated in hospitals and 5 were treated at home. Of the 4 treated in the hospitals 2 were cured and 2 are still under treatment. Of the 5 treated at home, 3 were cured and 2 are still being treated. Of the 9 cases reported midwives attended 5, doctors 3 and 1 was delivered in the hospital. It was reported that silver nitrate was used in all cases, but we had no way of proving or disproving these statements.

In 1914, 30 cases of ophthalmia were reported to the Board of Health. At that time no special effort was made to detect cases or impress upon the doctors or midwives the need of reporting them.

In 1915, 33 cases were reported and only 3 additional cases were detected, though our nurses assigned to districts including one third of the total births were continually looking for such cases and sent in 31 smears. It is therefore evident that there is a considerable reduction in the number of cases of ophthalmia, due, in no small measure, I believe, to the greater care exercised by the midwives and to the use of silver nitrate in all cases.

FLIES.

A recent extensive experiment carried on by the Association for the Improvement of the Condition of the Poor and the Health authorities of New York City fully demonstrated the important relation between flies and summer diarrhea, and brings home to us the urgent necessity of more concerted efforts to get rid of this disease carrier in Newark. We have tried in every way to teach our mothers the importance of protecting infants from flies, but it is almost impossible to do this in the congested neighborhoods where the homes are exposed to the flies that breed in nearby stables and in uncovered refuse and garbage. We therefore feel that this important activity in the reduction of infant mortality should receive the careful attention and co-operation of other Bureaus in the Department of Health as well as other Departments of the City.

CO-OPERATION.

The full application of modern ideas of prevention in public health requires the most intelligent kind of co-operation between all individuals, City Departments and private organizations that are working for the betterment of the community.

PHYSICIANS We have co-operated with the physicians of the City by trying to supply to their private patients wet-nurses or pumped breast milk at a cost that makes it possible for any family to avail itself of this life saving service. In order not to interfere in any way with medical practice we have instructed our nurses not to visit any baby that is attended by a physician, unless we have received from the physician a request that our nurse continue her instructions.

in infant hygiene. Furthermore, we have strictly adhered to the idea that our Bureau was created to conserve health and not to treat sickness, and have referred all cases of illness, no matter how slight, to physicians.

HOSPITALS. A very helpful co-operation has been established with our hospitals. All the hospitals of the City, whose facilities permit them to admit babies, have agreed to accept a nursing infant, though well, if the mother, for any reason, requires hospital care, and likewise to permit a nursing mother to remain in the hospital if the infant for any reason requires hospital care. While this question does not arise very often in hospital work, I believe we have scored a real victory for the idea of maternal nursing, which will have an immense educational value upon all who are interested in the care of babies, or are associated with institutional work.

PRIVATE ORGANIZATIONS. Without the aid of the private organizations of the City it would often have been impossible for us to carry out our propaganda of maternal nursing or to keep mothers and infants together. Without the generous assistance and co-operation of the Bureau of Associated Charities, the United Hebrew Charities and the Florence Crittenden Home much of our work for the prevention of too early artificial feeding and the separation of nursing mother and infant would have been impossible.

OTHER CITY DEPARTMENTS. The Poor and Alms Committee of the Common Council have been very much interested in our problem with destitute and unmarried mothers and contemplate establishing a convalescent home for destitute mothers. We shall be very glad indeed to assist in any way possible to make this very important phase of City work a means of solving many of the much neglected problems associated with dependent motherhood.

The City Clerk's office has been most helpful by permitting us to copy the records of all births received, and is now furnishing us with a transcript of all births.

TABLE 1 INFANT MORTALITY RATES BY WARDS.

WARD	Rate	WARD	Rate
First	72.13	Ninth	68.6
Second	106.02	Tenth	88.8
Third	73.4	Eleventh	40.6
Fourth	119.04	Twelfth	116.1
Fifth	111.47	Thirteenth	69.1
Sixth	110.5	Fourteenth	69.8
Seventh	88.2	Fifteenth	89.8
Eighth	71.1	Sixteenth	54.0

TABLE 2—INFANT MORTALITY RATES BY NATIVITY
OF MOTHER

NATIVITY OF MOTHER	Rate	NATIVITY OF MOTHER	Rate
United States	91.3	Austria	82.8
White	87.0	Germany	82.4
Colored	102.4	England	76
Italy	71.0	Ireland	80.7
Russia	78.6		

TABLE 3 INFANT MORTALITY BY ATTENDANT
AT BIRTH

ATTENDANT	Births	Number of Deaths		Infant Mortality Rate	
		Under	Under	Under	Under
		One Year	One Month	One Year	One Month
Total	10,955	135	390	85.3	35.4
Midwife	5,414	319	131	58.9	24.1
Physician	4,243	336	157	79.4	37.0
Hospital	1,295	115	65	88.9	50.1

TABLE 4—DEATHS UNDER ONE YEAR AND UNDER
ONE MONTH, BY WARDS

WARD	Under One Year	Under One Month	WARD	Under One Year	Under One Month
First	87	41	Ninth	37	11
Second	44	23	Tenth	72	30
Third	95	39	Eleventh	13	8
Fourth	31	13	Twelfth	78	36
Fifth	103	28	Thirteenth	51	27
Sixth	46	16	Fourteenth	77	35
Seventh	45	26	Fifteenth	31	11
Eighth	37	13	Sixteenth	36	9

Non-resident and address unknown not included

TABLE 5—DEATHS UNDER ONE YEAR AND UNDER
ONE MONTH, BY MONTHS

MONTH	Under One Year	Under One Month	MONTH	Under One Year	Under One Month
January	88	40	July	88	29
February	56	26	August	113	30
March	72	31	September	77	26
April	96	47	October	84	37
May	69	42	November	62	22
June	60	34	December	57	26

Omitted 13 deaths under one year.

TABLE 6. DEATHS UNDER ONE YEAR AND UNDER
ONE MONTH, BY NATIVITY OF MOTHER.

NATIVITY OF MOTHER	Under	Under	NATIVITY OF MOTHER	Under	Under
	One Year	One Month		One Year	One Month
United States	401	196	Germany	23	7
White	359	173	England	7	1
Colored	42	23	Ireland	23	10
Italy	179	64	Others	36	11
Russia	127	51	Nativity not given	13	.
Austria	126	50			

TABLE 7. DEATHS UNDER ONE YEAR AND UNDER
ONE MONTH, BY ATTENDANT AT BIRTH.

ATTENDANT	DEATHS		Births
	Under One Year	Under One Month	
Midwife	319	131	5,414
Physician	336	157	4,243
Hospital	115	65	1,295
Unknown	152	37	
Not stated	13		

DEATHS UNDER ONE YEAR BY CAUSES, SEX AND AGE

CAUSES	One Day		Two Days		Three Days		One Week		Two Weeks		One Month		Two Months		Three Months		Six Months		One Year				
	Under One Day	Under Two Days	Under Three Days	Under One Week	Under Two Weeks	Under One Month	Under Two Months	Under Three Months	Under Six Months	Under One Year	Under One Day	Under Two Days	Under Three Days	Under Six Months	Under One Year	Under One Day	Under Two Days	Under Three Months	Under Six Months	Under One Year			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
	n	s	18	22	16	33	9	96	18	20	20	10	50	20	41	23	30	70	66	40	46		
6. Measles																			1	1	4	6	
7. Scarlet fever																					1		
8. Whooping cough																			1	6	2	3	12
9. Diphtheria and croup																			1	2		3	
10. Influenza																			1	1			1
11. Dysentery																							
12. Diarrhoea																							
13. Purulent infection and septicemia																	1	2	2	1	1		7
14. Tetanus																	1						1
15. Tuberculosis of the lungs																	1	1	1				3
16. Tuberculosis meningitis																		5	4	3		12	
17. Syphilis	1	2	1	4																			
18. Gonococcal infection	1																1					17	
19. Exophthalmic goitre																						2	
20. Anemia, chlorosis																					19	19	
21. Other general diseases																					1	1	

DEATHS UNDER ONE YEAR BY CAUSE, SEX AND AGE. *Continued*

CAUSES	One Day	Two Days	Three Days	Four Weeks	Five Weeks	Six Weeks	One Month	Two Months	Three Months	Six Months	Nine Months	One Year
	Under One Year	Under Two Years	Under One Year	Under One Year								
	Day	Two Days	One Week	Two Weeks	Three Weeks	Four Weeks	Two Months	Three Months	Six Months	Nine Months	One Year	Year
	M	F	M	F	M	F	M	F	M	F	M	F
119 Other diseases of the intestines	1											1
120 Acute nephritis												1
121 Bright's disease												1
122 Other diseases of the kidneys and ureters												1
123 Acute abscess												1
124 Congenital malformation (still births not included)	8	4	2	1	1	1	6	5	2	1	1	28
125 Congenital debility (uterus and sclerema)	8	26	12	17	15	1	15	10	29	6	1	27
126 Other diseases peculiar to early infancy	2	7	1	1	2	1	1	1	1			57
127 Absorption of deleterious gases - conflagration excepted							1	2	1			1
128 Effects of the heat												1
129 Injuries - causes not specified												1
89 Cause of death not specified or ill-defined	1									1	1	1
Totals	146	63	38	21	53	18	36	76	64	174	136	95

TABLE 9. DEATHS UNDER ONE MONTH, AND OVER
ONE MONTH AND UNDER ONE YEAR, BY
PRINCIPAL DISEASE GROUPS.

CAUSE	Under	Over One Month
	One Month	and Under One Year
Contagious diseases	1	25
Diseases of the respiratory system	23	112
Diseases of the digestive system	31	201
Early infancy	291	78
Diseases of the nervous system	18	23
Syphilis	8	9
Others	16	97
Totals	390	545

TABLE 10. -STILL BIRTHS BY WARDS

WARD	Still Births	WARD	Still Births
First	53	Ninth	27
Second	21	Tenth	40
Third	39	Eleventh	10
Fourth	5	Twelfth	17
Fifth	20	Thirteenth	29
Sixth	13	Fourteenth	44
Seventh	31	Fifteenth	14
Eighth	24	Sixteenth	30

TABLE 11. -STILL BIRTHS BY NATIVITY OF MOTHER.

NATIVITY OF MOTHER	Number	Per 1,000	NATIVITY OF MOTHER	Number	Per 1,000
		Living Births			Living Births
United States	216	49.1	Austria	33	21.6
White	189	45.7	Germany	13	46.5
Colored	27	104.7	England	2	16.0
Italy	114	45.2	Ireland	11	11.5
Russia	53	32.8	Others	28	

TABLE 12 BIRTHS BY WARDS

WARD	BIRTHS	WARD	BIRTHS
First	1,206	Ninth	—
Second	239	Tenth	—
Third	1,293	Eleventh	—
Fourth	52	Twelfth	—
Fifth	924	Thirteenth	—
Sixth	416	Fourteenth	1,103
Seventh	510	Fifteenth	345
Eighth	520	Sixteenth	—

NOTE: 238 births of non-resident mothers and address unknown not included.

TABLE 13 BIRTHS BY MONTHS

MONTH	BIRTHS	MONTH	BIRTHS
January	971	August	957
February	902	September	949
March	966	October	859
April	937	November	814
May	864	December	881
June	941	Total	10,955
July	954		

TABLE 14 BIRTHS BY NATIVITY OF MOTHER

NATIVITY OF MOTHER	BIRTHS	PERCENTAGE DISTRIBUTION	NATIVITY OF MOTHER	BIRTHS	PERCENTAGE DISTRIBUTION
United States	1,111	40.9	Austria	1521	1.3
White	1,111	40.7	Germany	249	2.2
Colored	238	2	Ireland	265	2.4
Italy	259	2.2	England	125	1.1
Russia	1,111	1.8	Others	17	0.1
		—		—	—

TABLE 15. BIRTHS BY ATTENDANT.

ATTENDANT	BIRTHS	% DISTRIBUTION
Midwife	7,411	63.4
Physician	2,215	18.8
Hospital	1,217	11.8

TABLE 16. BIRTHS FOR EACH WARD BY NATIVITY
OF MOTHER

WARD	United States	Italy	Rus sia	Aus tria	Ger many	Eng land	Ire land	Others	Total
First	264	875	11	11	5	11	19	10	1,206
Second	168	25	17	13	5	2	13	16	251
Third	219	37	583	104	15	2	3	30	1,943
Fourth	135	70	12	3	6	3	14	9	252
Fifth	951	929	191	204	5	6	15	23	921
Sixth	256	60	27	31	10	3	22	7	116
Seventh	187	153	60	63	10	3	16	18	519
Eighth	303	140	18	16	11	11	10	11	72
Ninth	377	34	37	39	13	17	15	8	549
Tenth	212	292	104	140	19	4	17	22	810
Eleventh	217	46	16	4	9	13	8	7	520
Twelfth	28	8	118	11	37	8	9	16	132
Thirteenth	59	51	88	7	1	8	1	22	83
Fourteenth	271	397	183	206	23	6	5	11	1,105
Fifteenth	187	80	12	11	4	6	28	1	317
Sixteenth	413	12	96	52	45	12	11	6	618
Totals	4,218	2,511	1,603	1,508	287	17	258	2	11,117

NOTE 238 births of non-resident mothers and address unknown not included in total.

TABLE 17. BIRTHS BY NATIVITY OF MOTHER
AND ATTENDANT

NATIVITY MOTHER	Total	Midwife	Physician	Hospital	Percentage Midwives
Italy	2	1	1	0	50
Austria-Hungary	1	1	0	0	100
United States	1	1	0	0	100
Russia	1	1	0	0	100
Germany	1	1	0	0	100
Ireland	1	1	0	0	100
England	1	1	0	0	100
Others	1	1	0	0	100
Totals	9	5	3	1	56

NOTE: Three births had no attendant.

TABLE 18. UNREPORTED BIRTHS BY MONTHS
AND ATTENDANT

MONTH	Midwife	Physician	Hospital	Not located	Per cent Total
January	3	4	0	2	9
February	2	0	2	2	6
March	1	5	0	1	7
Apr 1	0	0	0	0	0
May	0	0	0	0	0
June	2	3	0	3	8
July	1	2	0	8	11
August	0	0	0	15	15
September	10	3	6	17	36
October	5	5	0	3	* 14
November	3	6	0	2	11
December	2	2	2	2	8
Totals	29	30	10	55	125

* One unreported birth had no attendant.

TABLE 19. LATE REPORTED BIRTHS, BY MONTHS,
AND ATTENDANT

MONTH	M.D.A.	C.	F.
January			
February			
March	25	21	46
April	6	14	26
May	2	14	16
June	3	4	7
July	4	2	6
August			
September			
October		8	8
November	11	1	1
December	1	-	-
Totals	82	57	107

TABLE 20. ILLEGITIMATE BIRTHS BY WARDS

WARD	BIRTHS	WARD	BIRTHS
First	* 13	Ninth	8
Second	8	Tenth	2
Third	15	Eleventh	3
Fourth	9	Twelfth	12
Fifth	15	Thirteenth	5
Sixth	7	Fourteenth	8
Seventh	17	Fifteenth	7
Eighth	7	Sixteenth	5

* Includes illegitimate births at Florence Crittenten Home

NOTE: 11 illegitimate births non-resident and address unknown

TABLE I. ILLEGITIMATE BIRTHS BY NATIVITY
OF MOTHER

Nativity	Number	Rate
United States	218	1.17
White	81	19.59
Colored	23	89.14
Italy	7	2.77
Russia	10	0.48
Austria	10	1.17
Germany	9	1.17
England	3	2.14
Ireland	2	7.78
Others	4	1.60
Total	152	

**Special Tables of Vital Statistics
FOR 1915**

GENERAL TABLE NO. 1

Deaths from all causes total during non-resident years (1891-1900) and including deaths in City Hospital, and the Sanatoriums at Soho and Verona

Age	1st Ward	2nd Ward	3rd Ward	4th Ward	5th Ward	6th Ward	7th Ward	8th Ward	9th Ward	10th Ward	11th Ward	12th Ward	13th Ward	14th Ward	15th Ward	16th Ward	Total
Under 1 year																	
Male	87	9	52	25	56	73	43	73	16	46	9	43	30	45	14	22	37
Female	43	10	50	7	36	26	21	4	13	22	5	38	18	38	10	20	55
Between 1 and 4																	
Male	24	5	15	3	15	22	5	4	5	18	6	16	13	11	6	12	780
Female	15	4	10	8	13	21	8	4	7	24	6	13	6	10	3	7	198
Between 5 and 9																	
Male	8	3	3		5	6	4		3	5	3	3	3	6	4	7	63
Female	5	2	2		3	4	2		2	4	2	2	2	4	2	3	32
Between 10 and 14																	
Male	1	4	5	1	3	5	1		1	2	1	2	3	5	1	2	30
Female	2	2	2		2	3	1		1	2	1	2	2	3	1	2	22
Between 15 and 19																	
Male	6	12	5	1	6	10	9	2	3	7	9	9	9	4	5	23	66
Female	3	2	5	2	5	10	4	1	3	5	9	9	9	4	5	3	62
Between 20 and 24																	
Male	4	8	6	4	11	12	6	3	5	1	9	6	3	4	3	6	84
Female	5	7	9	4	4	13	1	3	5	9	9	5	6	4	5	7	85
Between 25 and 39																	
Male	5	7	8	2	6	8	28	10	3	6	9	9	9	9	9	4	114
Female	4	13	12	2	9	21	3	2	5	5	11	6	6	9	9	4	112

GENERAL TABLE NO. 1. Continued

THE NUMBER OF CERTIFIED CASES AND DEATHS IN THE HOSPITAL, AND THE SANATORIUMS AT SOHO AND VERONA.

SEX	1st Ward	2nd Ward	3rd Ward	4th Ward	5th Ward	6th Ward	7th Ward	8th Ward	9th Ward	10th Ward	11th Ward	12th Ward	13th Ward	14th Ward	15th Ward	16th Ward	17th Ward	18th Ward	Total
<i>Letters 10 and 11—</i>																			
Males	9	18	10	4	6	37	6	5	2	3	2	3	12	0	5	5	1	134	
Females	6	11	8	3	1	10	5	5	8	7	1	4	6	6	5	5	1	87	
<i>Letters 12 and 13—</i>																			
Males	12	23	10	10	14	47	7	1	4	8	6	8	11	10	3	7	7	181	
Females	12	12	8	3	5	8	3	6	5	6	7	6	12	3	8	7	7	121	
<i>Letters 14 and 15—</i>																			
Males	19	91	15	7	11	44	8	8	8	9	4	12	8	14	3	9	208		
Females	6	10	8	6	6	39	4	3	9	4	3	7	5	7	5	7	7	103	
<i>Letters 16 and 17—</i>																			
Males	8	32	18	10	9	40	10	5	9	17	9	16	14	12	2	13	924		
Females	10	12	20	1	7	24	5	5	5	5	3	7	9	7	4	5	129		
<i>Letters 18 and 19—</i>																			
Males	20	21	13	9	4	42	7	9	8	7	6	8	11	19	6	13	193		
Females	10	15	6	6	6	17	8	8	8	6	8	7	9	13	11	8	146		
<i>Letters 20 and 21—</i>																			
Males	19	18	17	6	5	21	6	9	13	4	9	11	11	9	6	14	171		
Females	14	18	8	3	2	15	10	6	11	4	4	8	15	6	3	8	135		
<i>Letters 22 and 23—</i>																			
Males	8	24	16	5	14	26	7	8	17	10	13	6	11	10	7	9	1	134	
Females	11	12	7	6	7	29	8	8	11	9	4	6	10	13	5	8	1	103	

GENERAL TABLE NO. 1—Continued

Deaths from all causes, not including non-resident deaths by Wards, Age, Sex, and Notching deaths in City Hospital, and the Sanatoriums at Soho and Verona.

Age	1st to 7th Wards							8th to 16th Wards							17th Ward			Total
	1st Ward	2nd Ward	3rd Ward	4th Ward	5th Ward	6th Ward	7th Ward	8th Ward	9th Ward	10th Ward	11th Ward	12th Ward	13th Ward	14th Ward	15th Ward	16th Ward		
Between 60 and 64—																		
Male	11	12	10	4	11	21	2	13	17	5	7	4	7	13	15	4	4	4
Female																		
Between 70 and 74—																		
Male	5	7	8	6	4	13	5	5	10	11	12	2	13	6	3	7	126	
Female	5	10	15	3	6	15	8	6	13	8	22	6	8	11	10	8	163	
Between 75 and 79—																		
Male	6	10	7	1	3	18	5	4	18	3	7	2	7	7	3	5	106	
Female	9	12	8	5	6	18	4	12	5	3	13	9	8	8	3	6	122	
Between 80 and 84—																		
Male																		
Female																		
Between 85 and 89—																		
Male	2	3	1	1			2	3		1	—	2	—	1	2	20	4	
Female	2	1	—	—			—	—	1	—	—	—	—	—	—	—	—	
Non-residents																		
Male	3	2	2		1			1	4		1	—	1	1				
Female	2	2	—					2	—	8	1	—	1					
Total—																		
Male	215	243	225	100	186	480	174	106	170	156	110	6	6	8	14	18	1272	
Female	176	197	204	56	126	316	173	163	140	133	130	140	147	14	14	14	14	
Grand totals	381	440	429	156	312	891	247	211	310	289	240	290	323	10	10	10	10	

TOTAL DEATH RATE AND RATES FOR SEPARATE DISEASES PER 1,000
POPULATION, FOR TEN YEARS

DISEASE	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Population	21,164	21,018.4			21,677	25,048	37,400	38,800		
Total death rate	19.2	19.6	16.10	6.92	20.4	—	—	19	—	—
Scarlet fever	0.12	0.14	0.28	1.5	0.11	—	—	—	—	—
Diphtheria	0.4	0.37	0.21	0.32	—	—	—	—	—	—
Mumps	0.12	0.07	0.07	0.11	—	—	—	—	—	—
Whooping cough	0.17	0.19	0.13	0.38	—	—	—	—	—	—
Lobar pneumonia	1.53	1.46	1.08	1.19	1.7	0.9	0.8	1.11	1	—
Broncho-pneumonia	0.78	0.46	0.67	0.81	—	—	—	—	—	—
Cancer	0.74	0.85	0.74	0.81	—	—	—	—	—	—
Heart disease	1.72	1.88	1.9	1.66	—	—	—	—	—	—
Bright's disease	1.9	1.58	1.15	1.3	—	—	—	—	—	—
Typhoid fever	—	—	—	—	—	11	0.8	0	—	—

1915 does not include non residents' deaths

FURTHER LOSIS (All Forms)

Deaths by age and sex for the year 1915 (excluding deaths in City Hospital, Verona and Sono Salatoriums), not including non-resident deaths

Age Sex	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total		Proportion Other			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total	Females				
0 to 4	2	1	2	1																							9	7	16	3
5 to 9	3	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	13	25	2	
10 to 14	1																										6	8	14	3
15 to 19	1	1	1	1	3																					11	6	17	2	
20 to 24																											2	1	3	0
25 to 29	1	3	1	2	1	4	3	1	1	2	1	4	1	1	3	3	4		3	23	34	57	48							
30 to 34	5	2	2	3	4	2	4	3	2	1	2	6	5	5	5	2	3		32	40	72	69								
35 to 39	9	6	8	5	5	2	1	2	2	4	2	0	4	2	3	3	6	4	7	2	40	48	54	55						
40 to 44	6	5	4	3	5	9	7	4	2	9	1	1	4	2	4	4	4	2	2	35	38	81	73							
45 to 49	8	5	5	7	2	8	4	5	3	5	0	2	7	2	3	4	7	4	79	33	113	106								
50 to 54	7	3	7	3	3	8	2	8	2	6	4	3	1	3	2	8	2	7	2	72	26	98	92							
55 to 59	9	2	9	8	8	4	9	6	4	4	4	3	3	3	2	9	1	67	19	89	87									
60 to 64	4	1	0	1	7	2	6	1	4	1	1	4	1	3	1	1	5	46	10	56	50									
65 to 69	5	2	1	2	0	1			1	1		3						2	24	7	30	29								
70 to 74	1	2	1	1	3	1	1	1	1	1								1	1	14	3	17	17							
75 to 79	1	1	—	—	1	—	—	1	1	0								1	1	8	2	10	10							
80 and over			1	1	2			1		1								1	1	1	6	6	12	11	1					
Total	58	49	46	42	47	44	39	47	31	38	35	18	23	3	15	34	17	39	30	34	28	46	16	521	287	808	187	191		

TUBERCULOSIS (All Forms).

WARDS	OFFICES & WARDS												VILLAGE & RESIDENTIAL AREAS															
	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total	Non res.	Other	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Non res.	res.	Other			
1	2		1	1	4	1	6	2	1	2	2	2	2	4	3	5	2	1	3	4	4	1	33	21	42	19		
2	4	9	9	8	9	7	4	7	4	5	3	1	5	1	3	1	9	4	1	9	9	1	69	29	90	6		
3	6	2	2	1	3	2	2	1	1	2	1	4	4	4	2	5	3	2	1	3	3	3	32	19	42	9		
Fourth	1	1	4	1	1	1	9	1	2	1	3	0	1	1	1	1	1	1	1	1	1	1	23	12	32	3		
Fifth	1	1	1	3	1	3	2	1	1	1	3	2			2	1	0	0	2	0	1	1	1	29	12	28	4	
Sixth	11	7	16	6	18	4	9	12	13	4	10	5	10	4	5	2	2	2	3	3	4	1	100	44	129	24		
Seventh	2	1	3	4	4	2	3	6	3	1	3	1	2	1	6	6	5	3	3	3	3	3	34	13	37	10		
Eighth	2		2		3		1	1	2	2	2		1	1	2	2	2	1	1	1	1	1	1	13	13	21	5	
Ninth		1	1	1	3	2	1	3	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	21	15	21	5	
Tenth	3	4	9	9	8	7	4	7	4	5	3	1	5	1	3	1	9	4	1	9	9	1	69	29	90	6		
Eleventh	2	1	5	3	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	14	22	4	4	
Twelfth		1	1	4	5	1	1	3	1	1	2	1	2	1	1	1	2	1	1	1	1	1	1	17	14	20	7	
Thirteenth	3	1	4	1	6	3	4	3	3	2	6	3	2	2	3	1	1	3	1	3	2	1	22	11	27	6		
Fourteenth	4	1	5	3	1	3	1	1	2	2	4	3	2	4	1	3	1	3	1	2	3	1	39	18	50	7		
Fifteenth	2	1	1	1	1	1	1	2	3	2	5	2	2	2	2	1	1	1	2	3	2	1	24	21	48	5		
Sixteenth	2	2	3	5	1	3	2	3	2	2	2	1			2	1	1	1	2	1	2	1	17	16	29	4		
Totals	28	96	48	22	66	27	44	39	47	26	9	95	55	23	31	17	34	17	36	20	34	28	46	16	521	287	687	191

TABLE NO. 1.
Total Deaths and Death Rates per Thousand, and Deaths and
Death Rates from Pulmonary and Other Forms
of Tuberculosis Since 1900.

YEAR	Total Deaths	Total Death Rate per M	Total Deaths Pulmonary Tuberc.	Death Rate Pulmonary Tuberc.	Total Deaths All Forms Tuberc.	Death Rate All Forms Tuberc. per M
1900	7,081	2.1	4,621	2.1	6,766	2.1
1901	1,803	1.1	781	1.1	-	-
1902	6,413	1.8	576	1.8	6,989	2.1
1903	6,221	18.50	56	1.7	6,818	1.0
1904	6,785	1.77	5	1.7	6,855	1.8
1905	6,222	17.71	617	2.8	6,881	1.2
1906	6,771	2.11	189	2.5	8,512	2.9
1907	5,744	2.8	183	2.28	7,177	2.0
1908	5,394	2.4	128	2.4	7,111	2.6
1909	5,122	2.6	5	1.0	7,011	2.1
1910	7,821	1.66	181	1.66	8,122	1.40
1911	117	17.16	781	1.66	117	2.01
1912	122	11.67	56	1.5	56	1.1
1913	6,221	11.6	61	1.4	-	1.0
1914	7,809	11.70	58	1.1	56	1.1
1915	7,820	11.05	187	1.8	8,018	2.12

TABLE NO.
Deaths from All Forms of Tuberculosis Arranged by Months
for the Year 1915

Month	PULMONARY			OTHER FORMS		
	Male	Female	Total	Male	Female	Total
January			18	6		8
February	41	19	63	5	2	7
March	54	23	77	11	1	12
April	37	32	69	7	1	11
May	42	18	60	5	1	6
June	34	21	55	3		3
July	41	15	59	11		11
August	25	13	38	7		7
September	31	16	47	2		2
October	26	15	51	2		2
November	33	21	54	5		5
December	42	15	57	3		3
Totals	455	233	688	67	5	1,10
						808

PNEUMONIA (All Forms)

Deaths by age and sex for the year 1918, including deaths in City Hospital, Veterans and State Sanatoriums, not including non-resident deaths

AGE	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total		Total bar. cho	Bron. cho	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
Under one year	13	7	8	7	2	2	14	5	5	1	6	2	1	2	3	1	5	4	6	4	5	5	60	51	116	37	79		
1 to 2	13	6	8	7	16	9	7	4	4	4	4	2	1	4	4	5	3	4	8	58	49	107	46	61					
3 to 4					2	1	3				8		1	1	3		1			2	1	12	10	22	7	13			
5 to 6					1	1	1				2		1	1	1		1			1	1	8	3	11	8	3			
7 to 8	1				1	1	1													1	1	3	2	5	3	2			
9 to 10					1															1	1	4	4	8	6	2			
11 to 12					1		2			1							1		1	3	1	7	4	11	9	2			
13 to 14	2	1	1		1	4	2				1	2	1	1	1					1		8	9						
15 to 16					1	1	3		1	5		1		1						4		13	2	15	13	2			
17 to 18	1	1	1		1	4	3		3					1	1	2		2	1	1	3	9	17	11	28	27	1		
19 to 20	3	2	9	2	3	1	3	1	1					1	1				3	2	4	1	17	12	29	26	1		
21 to 22	9	1	1	2	1	1	2	6	2	3	1	1						1	4	1	6	1	23	13	36	21	7		
23 to 24	5	3	2	1	2	4	2	3	1	1					1		1	1	2	1	2	1	14	18	32	29	3		
25 to 26	2	1	1	3	9	5	1	1	1								1		2	2	2	4	15	13	29	23	5		
27 to 28	6	4	1	1	4		5	1	1	1	1	1					1		1	2	3	1	23	10	33	24	9		
29 to 30	2	2	2	3	3	4	3	1	1	1	1								1		3	4	17	16	35	31	4		
31 to 32	1	1	2		5	1	3	1			2	1						1	1	4	2	11	15	26	20	6			
33 to 34			2	1	4	3	3	1			2	1	1	1	1			1	1	1	1	9	17	26	26	9			
35 to 36	1		3	1					1										2	1		6	5	11	9	2			
37 to 38			1	1																	1	2	3	1	2				
4 and over																					1	1	1	1	1				
Totals	48	22	25	27	43	40	50	39	18	18	25	13	9	8	10	13	10	10	8	20	24	25	53	26	320	998	600	395	20

CANCER.

Dec. - A VITAL STATISTICS FOR THE YEAR 1915, INCLUDING DEATHS IN CITY HOSPITALS, ACCORDING TO SATURDAY NUMBERS, NOT INCLUDING NON RESIDENT DEATHS.

	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
	D	E	M	A	J	J	A	S	O	N	D	Total
Under one year												
to 2												
to 5												
to 10												
to 20												
to 30												
to 40												
to 50												
to 60												
to 70												
to 80												
to 90												
to 100												
to 110												
to 120												
to 130												
to 140												
to 150												
to 160												
to 170												
to 180												
to 190												
to 200												
to 210												
to 220												
to 230												
to 240												
to 250												
to 260												
to 270												
to 280												
to 290												
to 300												
Total	13	14	19	10	9	16	16	6	16	112	207	520

PNEUMONIA (All Forms).

Deaths for year 1915, according to Ward, Sex and Calendar month, not including non resident deaths.

CANCER

WARD	Jan.		Feb.		March		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
First	1	2	1	1	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	0
Second	1	3	1	0	2	0	2	1	4	1	1	1	1	1	1	1	1	1	1	4	1	9	3	14	96	96
Third	1	1	1	2	1	0	1	3	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	22	54	54
Fourth	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fifth	1	5	2	4	4	0	2	3	0	0	1	3	1	1	1	1	1	1	2	1	1	1	1	14	28	28
Sixth	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	4
Seventh	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Eighth	1	3	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	9
Ninth	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Tenth	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4
Eleventh	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Twelfth	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
Thirteenth	1	3	1	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	3	6	15
Fourteenth	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	14
Fifteenth	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sixteenth	1	1	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	9
Total	19	31	5	17	7	12	6	9	7	9	5	1	6	1	13	8	14	13	10	4	16	16	6	16	13	907

HEART DISEASE

Deaths at the Hospital Verona and Soho Sanatoriums, not including non-resident deaths

HEART DISEASE

Deaths from heart disease in Waukegan and the number of deaths during each month.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1	1	3	2	1	1	1	1	1	1	1	1
January	1	1	3	2	1	1	1	1	1	1	1	1
February	1	1	3	2	1	1	1	1	1	1	1	1
March	1	1	3	2	1	1	1	1	1	1	1	1
April	1	1	3	2	1	1	1	1	1	1	1	1
May	1	1	3	2	1	1	1	1	1	1	1	1
June	1	1	3	2	1	1	1	1	1	1	1	1
July	1	1	3	2	1	1	1	1	1	1	1	1
August	1	1	3	2	1	1	1	1	1	1	1	1
September	1	1	3	2	1	1	1	1	1	1	1	1
October	1	1	3	2	1	1	1	1	1	1	1	1
November	1	1	3	2	1	1	1	1	1	1	1	1
December	1	1	3	2	1	1	1	1	1	1	1	1

Deaths

8 10 12 14 16 18 20 22

BRIGHT'S DISEASE

Deaths by Age and Sex for the year 1911, including deaths in City Hospitals, Verona and Sanio Sanatoriums, not including non-resident deaths

Age & Sex	1911						1912						1913						1914						1915						
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	
0-4																															
5-9																															
10-14																															
15-19																															
20-24																															
25-29																															
30-34																															
35-39																															
40-44																															
45-49																															
50-54																															
55-59																															
60-64																															
65-69																															
70-74																															
75-79																															
80 and over																															
Totals	42	16	13	26	28	22	21	21	24	12	17	15	26	91	14	15	20	20	30	19	33	26	46	10	318	249	6				

BRIGHT'S DISEASE

Month	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.	
	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.	Mon.	Tue.
Jan.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Feb.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mar.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Apr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Aug.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sept.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Oct.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Nov.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Dec.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Total	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39

DIPHTHERIA

Deaths by disease, Section II - of 19, according to the city names. Averages for State groups, not including non-resident deaths

BOARD OF HEALTH.

DIPHTHERIA.

Deaths for year 1911, according to Ward Six and the City of New Haven, excluding cases of adults.

	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
	M	F	M	F	M	F	M	F	M	F	M	M
Jan												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
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181												
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183												
184												
185												
186												
187												
188												
189												
190												

SCARLET FEVER

Deaths by Age and Sex for the year 1915 (including deaths in City Hospitals, Vermont and State Sanatoriums), not including non-resident deaths.

AGES	F		M		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0																						
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10 and over																						
Total	2	2	1	1																		

254

BOARD OF HEALTH

SCARLET FEVER

Deaths for year 1915 according to Ward, Sex, and Calendar Month, not including non-resident deaths

Age D.	Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Infant																								
1-4 years																								
5-9 years																								
10-14 years																								
15-19 years																								
20-24 years																								
25-29 years																								
30-34 years																								
35-39 years																								
40-44 years																								
45-49 years																								
50-54 years																								
55-59 years																								
60-64 years																								
65-69 years																								
70-74 years																								
75-79 years																								
80-84 years																								
85-89 years																								
90 years and over																								
Total																								

TYPHOID FEVER

Deaths by Age and Sex of Cases of Typhoid Fever in the City of New Haven, Connecticut
 (sums), not including non-resident deaths

AGES	March		April		May		June		July		August		September		October		November		December	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 1 year	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 to 4 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 to 9 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 to 19 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 29 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 39 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 to 49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 to 59 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60 and over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

BOARD OF HEALTH.

TYPHOID FEVER

¹² See also the concluding words of Justice M. H. Patel in his dissenting death sentence.

BOARD OF HEALTH.

MEASLES

Deaths by Age and Sex for the year 1915 (including deaths at the City Hospital, Verona and Soho Sanatoriums), not including non-resident deaths

NOTE: Only two leafs over two years of age.

MEASLES

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.
Month	M	F	M	F	M	F	M	F	M	F	M	F	M
Jan.													
Feb.													
Mar.													
Apr.													
May													
June													
July													
Aug.													
Sept.													
Oct.													
Nov.													
Dec.													
Jan.													

For
February
1891
F. Dugay,
Secretary

To Dr. G.

WHOOPING COUGH

Deaths by Age and Sex for the year 1911, including deaths in City Hospitals, Verona and Solo Seminary
 (sums), not including non-resident deaths.

Age	Month												Month											
	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
0-1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1-4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5-9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10-14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15-19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20-24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25-29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30-34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35-39	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40-44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45-49	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
50-54	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
55-59	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
60-64	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
65-69	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
70-74	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
75-79	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
80-84	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
85-89	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
90-94	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95-99	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTE: No deaths over 14 years of age

WHOOPING COUGH

DEATHS FROM WHOOPING COUGH BY WARD, SEX AND PERIOD OF MONTH FOR FEBRUARY, 1911, EXCLUDING NON-RESIDENT DEATHS

WARD	Feb.			March			April			May			June			July			August			Sept.			Oct.			Nov.			
	V	P	M	V	P	M	V	P	M	V	P	M	V	P	M	V	P	M	V	P	M	V	P	M	V	P	M	V	P	M	
First																															
Second																															
Third																															
Fourth																															
Fifth																															
Sixth																															
Seventh																															
Eighth																															
Ninth																															
Tenth																															
Eleventh																															
Twelfth																															
Thirteenth																															
Fourteenth																															
Fifteenth																															
Sixteenth																															
Seventeenth																															
Eighteenth																															
Nineteenth																															
Twenty-first																															
Twenty-second																															
Twenty-third																															
Twenty-fourth																															
Twenty-fifth																															
Twenty-sixth																															
Twenty-seventh																															
Twenty-eighth																															
Twenty-ninth																															
Thirty-first																															
Thirty-second																															
Thirty-third																															
Thirty-fourth																															
Thirty-fifth																															
Thirty-sixth																															
Thirty-seventh																															
Thirty-eighth																															
Thirty-ninth																															
Forty-first																															
Forty-second																															
Forty-third																															
Forty-fourth																															
Forty-fifth																															
Forty-sixth																															
Forty-seventh																															
Forty-eighth																															
Forty-ninth																															
Forty-tenth																															
Forty-eleventh																															
Forty-twelfth																															
Forty-thirteenth																															
Forty-fifth																															
Forty-sixth																															
Forty-seventh																															
Forty-eighth																															
Forty-ninth																															
Forty-tenth																															
Forty-eleventh																															
Forty-twelfth																															
Forty-thirteenth																															
Forty-fifth																															
Forty-sixth																															
Forty-seventh																															
Forty-eighth																															
Forty-ninth																															
Forty-tenth																															
Forty-eleventh																															
Forty-twelfth																															
Forty-thirteenth																															
Forty-fifth																															
Forty-sixth																															
Forty-seventh																															
Forty-eighth																															
Forty-ninth																															
Forty-tenth																															
Forty-eleventh																															
Forty-twelfth																															
Forty-thirteenth																															
Forty-fifth																															
Forty-sixth																															
Forty-seventh																															
Forty-eighth																															
Forty-ninth																															
Forty-tenth																															

DEATHS IN INSTITUTIONS FOR 1915

	1908
Newark City Hospital	320
St. Michael's Hospital	75
German Hospital	64
St Barnabas' Hospital.	108
Beth Israel Hospital	102
Babies' Hospital	23
Newark Private Hospital	15
Homeopathic Hospital	10
Home for Aged	51
Alms House .	83
St James' Hospital	22
Home for Incurables	3
Home for Crippled Children	24
Little Sisters of Poor	22
Presbyterian Hospital	7
House of Good Shepherd	5
Eye and Ear Infirmary	15
Women and Children Hospital	15
Maternity Hospital	7
Baptist Home	5
Tiffany Co	1
Second Precinct Police Station	1
Public Service	3
Ambulance en route to hospital.	3
Police Ambulance	1
Central Railroad Depot	1
Foster Home	1
Essex County Jail	1
Essex County Isolation Hospital	143
Dr Waite Hospital	2
P. R. R. Depot .	1
Automobile en route to hospital	2
Central Laundry	1
Hotel Jefferson	1
City Hall	1
Florence Crittenton Home	1
Home for Friendless	1
St Mary's Orphanage	2
St Peter's Orphanage	1
Inox Hotel	1

CASES AND DEATHS—NEWARK CASES SENT TO ESSEX
COUNTY ISOLATION HOSPITAL, SOHO, N. J., 1915.

MONTH	TUBERCULOSIS		SCAR	FEVER	PNEUMONIA	
	Cases	Deaths			Cases	Deaths
January	12	7	24	1	23	5
February	15	10	13	1	28	3
March	25	5	19	2	23	1
April	20	11	14	1	19	4
May	17	9	8	2	18	5
June	22	10	2		7	1
July	31	12	5		9	2
August	17	8	5		5	1
September	9	4	3		3	
October	18	12	2		3	
November	15	11	9		26	3
December	18	5	13	1	13	2
Totals	219	104	129	11	192	-

Grand Total Cases 756 Deaths 112

NON-RESIDENT DEATHS BY DISEASE, MONTHS AND SEA

12

MORTALITY FIGURES FOR NEWARK

For the Year 1915

Including non-resident deaths, arranged to give disease,
age and sex and according to International Classification

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915

Including non-resident deaths, arranged to give disease, age and sex and according to International Classification.

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915. *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—*continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1916. *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1910 - *Continued*

CAUSES OF DEATH	AGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158
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MORTALITY FIGURES FOR NEWARK FOR YEAR 1915. *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 - *Continued*

CAUSES OF DEATH

Meningitis
Males
Per cent

Total

Cerebrospinal Meningitis
Males
Females

Total

Cysticercosis, Payer
Males
Females

Total

Leishmaniasis, Aetiology
Males
Females

Total

Other Lesions of Spinal Cord
Males
Females

Total

Acute Asthmatic Poliomyelitis
Males

MONUMENTAL LIGHTS FOR NEWARK IN THE YEAR 1915. *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1910. *Continued.*

CAUSES OF DEATH	1910												1911													
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
Ages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Convulsions (non-puerperal)ive years and over Females																										
Convulsions (under five years)																										
Males																										
Females																										
Total	9	1	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Negalgia and Negritus Females																										
Other Diseases of Nervous Sys- tem—																										
Males	6	1								1	1															
Females	1	1								1	1															
Total	18	2								2	1															
Diseases of Eyes and Annexa																										
Males																										
Diseases of Ears Males																										
Pericarditis																										
Males																										
Females																										
Total	3																									
Acute Endocarditis																										
Males	3	2	1	3	1	7	1	4	1	4	1	1	1	3	1	1	1	1	1	2	1	1	1	1	1	
Females	6	3								1	1				1	1	1	1	1	1	1	1	1	1	1	1
Total	10	5	1	7	1	8	1	5	1	5	1	1	1	4	1	1	1	1	1	2	1	1	1	1	1	

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915. *Continued.*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued.

CAUSES OF DEATH	All Ages	Up to Age 1					Total Under 5					10 to 14					20 to 24					30 to 34					40 to 44					50 to 54					60 to 64					70 to 74					80 to 84					85 and Over					Not Over State				
		1	2	3	4	5	Und'r 5	10	14	18	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	98	99	100	101	102	103	104	105	106	107	108	109	110																		
Diarrhoea and Enteritis under two years																																																													
Males	167	41																																																											
Females		62																																																											
Total	268	103	44																																																										
Diarrhoea and Enteritis 2 to 5 years and over																																																													
Males						5	2			7	2	1	1	1				1	1	1	1	1																																							
Females										8	1																																																		
Total										4	1																																																		
Appendicitis and Syphilis																																																													
Males	86		1			1	1	3	2	5	2	1	1	4				5	9	6																																									
Females		13								1																																																			
Total		100	1			1	1	3	3	8	2	2	1	5				2	6	4																																									
Hernia																																																													
Males																																																													
Females																																																													
Total		11																																																											
Intestinal Obstruction																																																													
Males																																																													
Females																																																													
Total		10																																																											

MORTALITY FIGURES FOR SWITZERLAND FOR YEAR 1915 - *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915. *Continued*

MOBILE MAILS, 1914-1918, LETTERS HOME, 21 NOV. 1915. Continued

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915. *Continued*

THE CROWN LAW IN ENGLAND

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MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1913. *Continued.*

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Table 1

[Page 5]

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MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 - *Continued*

CAUSES OF DEATH	Age	Decades												Decades											
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	0-9	10-19	20-29	30-39
Fever																									
Pneumonia		5		1		1																			
Total		43		1	2	3		2	1	3	2		4	2	7	2	3	1	2		1	2			
Malaria																									
Total																									
Measles																									
Infantile																									
Total		1																							
Scarlet fever																									
Males																									
Total		17						1	1	1	1		1	1	3	1		2				1			
Syphilis																									
Males																									
Total		9		1	2	2	4	1		1															
Females																									
Total		3																							
Total		28		1	1	4	3	2	4	1		1	1	2	1	2	1								
Other Infectious																									
Males		9		2		6	3									1	1	1							
Total		9		1	2	3	1									1	1	1							
Females																									
Total		11		1	2	3	1	3								1	1	1							

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915. *Continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

APPENDIX I.

During the year the Board of Health adopted the following ordinances:

An Ordinance to Prevent the Spread of Whooping Cough

Be It Ordained by the Board of Health of the City of Newark

1. No parent or guardian of any infant under ten years of age suffering from the disease commonly known as whooping cough shall permit any such infant to appear in the street or in any other public place within the City of Newark, unless such infant shall wear and expose upon the arm a band of yellow material bearing upon it the words, "Newark Health Department Whooping Cough." The band shall be in a form to be prescribed and supplied by the Board of Health, and shall be worn for a period beginning with the earliest recognition of the disease and continue until danger of infection is over, but in no event less than six weeks.

2. No parent or guardian of any infant under the age of ten years suffering from whooping cough shall permit any such infant to board any street car or other public conveyance or visit any house, other than the house in which such infant resides, or any store, school, Sunday school or building of public assembly.

3. Any parent or guardian violating any of the provisions of this ordinance shall be subject to a fine of ten dollars (\$10.) for each offense.

4. This ordinance to take effect September 1st, 1915.

July 7, 1915

An Ordinance Concerning Boarding Houses for Infants and Boarding Homes for Children, and the Business of Placing Infants, and Maternity Boarding Houses or Lying-in Hospitals, providing for Licenses by the Board of Health, Providing for the Revocation Thereof, and Providing for Penalties.

Be It Ordained, by the Board of Health, of the City of Newark, as follows:

Section 1 That it shall be unlawful for any person, firm, corporation or association to conduct or maintain a maternity hospital, a boarding house for infants, or a boarding home for children, or to engage in, or assist in conducting, a business of placing infants as herein defined, without having a written license therefor from the Board of Health, provided that nothing in this ordinance shall apply to any institution maintained and operated by the State of New Jersey nor by any municipality thereof, or to any incorporated charitable society for the placing of infants and children.

Sec 2 The following terms used in this ordinance shall have the following meanings:

"Boarding house for infants" shall mean a house or other place conducted or maintained by any one who advertises himself or holds himself out as conducting a boarding house for infants under three years of age, or who receives illegitimate children under three years of age, or who has in his custody or control one or more infants under three years of age unattended by parents or guardians, for the purpose of providing such children with food or lodging, excepting children related to him by blood or marriage, or who have been legally adopted by him.

"Boarding home for children" shall mean any children's home, orphanage or other institution, association, organization or individual engaged in receiving, caring for, and finding homes for orphans, dependent or neglected children.

"Maternity hospital" shall mean any house or hospital whose the principal business carried on shall consist in the care of women prior to, during and after childbirth.

The business of placing infants shall consist in finding or assisting to find homes for any infant under the age of three years with persons other than relatives, in procuring or assisting in procuring the adoption of any such infant, in disposing or assisting to dispose of any such infant in any other manner.

Sec. 3. No license above provided for shall be granted for a term exceeding one year. Every such license shall state the name of the licensee, the particular premises in or at which the business shall be carried on, and the number of inmates that may be treated, maintained, boarded or cared for at any one time, and said license shall be posted in a conspicuous place in the house or other place at which the business is conducted. No greater number of inmates shall be kept at one time on the premises than is authorized in the license, and no inmates or infants shall be kept or disposed of within a building or place not designated in the license. The record of such license when issued shall be kept by the Board of Health. Said license shall be subject to revocation for violation of any of the provisions of this ordinance or whenever in the judgment of the Board of Health such boarding home is no longer needed. The Board of Health shall annually, or oftener if found desirable, visit and inspect or designate persons to visit and inspect, the premises and investigate the manner of conducting the business licensed. Said Board and such persons shall have the right to call for and examine the records required by this ordinance to be kept, and to inquire into all matters concerning such licensed premises and the women and children therem, and it shall be the duty of the licensee to give all information to such persons and afford them every reasonable facility for examining the records, inspecting the premises and seeing the inmates thereof.

Sec. 4. Every person, firm, corporation or association conducting a maternity hospital, a boarding house for infants, or engaged in the placing of infants, as defined in this ordinance, shall keep a record in a form to be prescribed by the Board of Health, wherein shall be entered the name, age, sex, color and religion of every child born on his premises, cared for or treated by him, or brought to him for placing, or finding a home for, or giving out for adoption, or otherwise disposing of, together with the name and address of each of the parents of said child, the name of every woman and of every child who dies while in his care together with the date of such death, also the name and

residence of the person with whom the child is placed or by whom it is adopted, this entry to be made within twenty four hours after such child is given out, taken away, or disposed of in any manner. A true copy of such record shall be sent to the Board of Health at such times as the Board of Health shall require.

Sec. 5. Any person who shall violate any of the provisions of this ordinance, upon conviction thereof shall be punished by a fine of fifty dollars (\$50).

An Ordinance to amend Section 1116, Chapter LXXIV, entitled "Contagious Diseases," of the Revised Ordinances of the City of Newark.

Be it ordained by the Board of Health of the City of Newark, as follows.—

Every practicing physician in this city shall report in writing to the Board of Health, the name of every patient he or she shall have affected with anthrax, chicken-pox, cholera, diphtheria or membranous croup, epidemic meningitis, epilepsy, erysipelas, glanders, infantile paralysis or polo myelitis, leprosy, malaria, measles, mumps, ophthalmia neonatorum, plague, primary pneumonia, lobar pneumonia, rabies, scarlet fever, small pox (including varioloid), tetanus, trachoma, trichinosis, tuberculosis (any form), typhoid fever, typhus fever, whooping cough, yellow fever, or any other contagious disease that may be hereafter publicly declared by this board to be dangerous to the public health, together with the precise locality where such patient may be found, immediately after such physician shall ascertain or suspect the nature of such disease. Any person or persons failing to comply with, violating or offending against the provisions of this section shall, on conviction thereof, forfeit and pay a penalty of fifty dollars.

The following laws were passed by the State Legislature during 1915, which affect the health of this city —

Chapter 288

An act to increase the efficiency of public health protection in this State, to abolish the State Board of Health, and to create a State Department of Health, and to prescribe and define the powers and duties of such department

Chapter 389:

An act to amend an act entitled "An act to secure in this State the certification of births and deaths, and of the vital facts relating thereto, and to provide for the revision thereof." (Revision of 1909.)

Chapter 366

A supplement to an act entitled "An act concerning marriages," approved March twenty-seventh, one thousand nine hundred and twelve

Chapter 236

An act to permit the retirement, on pension, from public office or position, of the health officer or other chief officer of the local Board or Department of Public Health in cities of the first class, after twenty-five years' continuous service in public office or position and after having attained the age of sixty years, and defining the manner of payment of the said pension.

Chapter 209

An act empowering boards of health or commission or board authorized by law to pass ordinances, in any incorporated municipality in the State to pass and enforce ordinances to license and regulate the manner of keeping boarding houses for infants and children within such municipality, to fix a license fee for the same, and to prevent unlicensed persons or corporations from keeping such boarding houses for infants and children.

Chapter 160

An act to amend an act entitled "An act for the prevention of cruelty to animals," approved March eleventh, one thousand eight hundred and eighty

Chapter 24

An act to amend an act entitled "A supplement to an act entitled 'An act for the punishment of crimes (Revision of 1898),' approved June fourteenth, one thousand eight hundred and ninety-eight," which said supplement was approved April thirteenth, one thousand nine hundred and eight

Chapter 339

An act to prevent the transmission of any communicable disease through any dairy product

Chapter 26

An act to amend an act entitled "An act concerning contagious and infectious diseases among animals, and to repeal certain acts relating thereto," approved May fourth, eighteen hundred and eighty six

Chapters 36 and 298

An act to amend an act entitled "An act concerning contagious and infectious diseases among cattle, regulating the importation of cattle into this State and providing measures to check the spread of diseases among cattle in this State; creating the commission on tuberculosis among animals, prescribing its powers and duties and fixing penalties for violation of this act," approved April twenty fourth, one thousand nine hundred and eleven

Chapter 291

An act for the prevention and control of rabies

Chapter 285

An act to regulate the pasteurization of milk, cream or other milk products, to provide for the licensing of establishments where milk, cream and other milk products are pasteurized and to confer upon the Board of Health of the State of New Jersey power to make rules and regulations regarding the pasteurization of such milk, cream and other milk products

Chapter 73

An act to amend an act entitled "An act to amend an act entitled 'An act to secure the purity of foods, beverages, confectionary, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof (Revision of 1907),' approved May twentieth, one thousand nine hundred and seven," approved April sixteenth, one thousand nine hundred and eight

Chapters 74, 243 and 357

A supplement to an act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines to prevent certain infectious diseases thereof (Revision of 1907)," approved May twentieth, one thousand nine hundred and seven.

Chapter 378

An act to amend an act entitled "A supplement to an act entitled 'An act to secure the purity of the public supplies of potable waters in this State,' approved March seventeenth, one thousand eight hundred and ninety-nine," approved April twenty first, one thousand nine hundred and nine.

APPENDIX II.

Foodstuffs condemned during 1915 by Food and Drug Inspectors

- 700 quarts of milk
- 4 chickens
- 1 barrel flour.
- 58 dozen eggs.
- 12 cans salmon
- 20 cans sardines
- 4 packages powdered jelly.
- 9 bottles fish
- 5 barrels F. Amise or Finochchie.
- 1 box filthy candy
- 1½ pounds shrimp
- 9 quarts strawberries
- 7 crates strawberries
- 32 lbs. arts apples
- 38 quarts strawberries
- 2 boxes cherries
- 1 chicken
- 2 cans tuna fish.
- 7 cans clam chowder
- 1 can Heinz beans
- 5 cans McGowan's salmon
- 3 half cans McGowan's salmon
- 8 cans LeRoy p...
4 cans Queen Quality peas
- 1 can Honey Drop corn
cans Rivertide to...es
- 4 cans Rob Roy tomatoes
- 7 bottles My Wife's Salad Dressing
- 1 box cherries
- 3,000 bottles soda water
- 11 baskets peaches
- 1 box pears.
- 8 barrels apples
- 110 quarts eggs
- 2 boxes cake

1½ boxes apricots.
2 boxes raisins
1-3 barrel spiced fish
½ pail apple butter
1 chicken.
198 mackerel, salmon, sardines, lobster and fish.
19 packages Gorton Cod Fish
5 packages Beardsley Cod Fish.
4 cans Campbell's beans.
4 cans pimentoes
1 box Howard salad dressing.
2 bottles Royal chile sauce.
5 bottles onion salad
17 bottles Wilde's pickles
8 bottles Blue Label catsup
4 bottles smoked beef
7 bottles My Wife's Salad Dressing
6 cans Bartlett pears.
6 cans succotash
9 cans peas.
5 cans high grade beans
5 cans Honey Drop corn
32 cans tomatoes
6 cans egg plants
12 cans McGowan's salmon
7 cans blue string beans
4 cans high grade kidney beans.
44 cans Van Camp's soup
14 cans milk
13 bottles olive
24 cans tomatoes and canned fruit.
1 basket apples.
22 muskmelons
8 large baskets plums
1 large 16-quart basket lima beans.
2 crates peaches
. box plums
26 pounds pot cheese
5 crates cantaloupe
3 gallons vinegar
21 cases cherries, 2 dozen cans to a case.
200 pounds meat
3 large cases sarsaparilla.

- 13 small cases mixed soda
- 2½ cases cream soda
- 4 large cases mixed soda
- 13 cases gassoil.
- 5 bottles mixed soda
- 3 barrels rabbits
- 15 ducks
- 8 turkeys
- 10 chickens.
- 17 bottles Queen olives
- 15 bottles Sheteld olives
- 18 bottles large Blue Label catsup
- 9 bottles large Beechnut bacon
- 14 bottles horse radish
- 29 bottles Curtice jam.
- 6 bottles milk jar mustard
- 18 Bottles Howard salad dressing
- 15 bottles Barnett's vanilla
- 16 bottles Goodheart's extract
- cans Fisher Boy sardines
- 7 cans Curtice chicken
- cans Curtice chicken
- 7 cans Eagle milk
- 7 cans Darling milk
- 1 Peerless milk
- Midland milk
- cans Clover milk
- 1 3 cans Van Camp's Milk (tall)
- cans Van Camp's Milk (baby)
- 7 cans Gold Cross milk
- 1 cans Brakely lima beans
- cans shredded wheat
- cans Hecker's Farina
- 1 packages dog cake.
- 13 packages Ralston's Food
- 7 packages yellow meal (2 pounds)
- 2 packages yellow meal (5 pounds).
- packages Cream of Wheat
- 7 packages Hecker's flap jack (large).
- packages puffed wheat
- 14 packages Mother's Oats
- 3 packages hominy
- 1 packages Triphosa

7 bottles Centennial mustard
87 bottles peanut butter, American brand (large).
24 bottles peanut butter, American brand (small)
16 bottles jam.
18 bottles Curtice jam.
14 cans Sinclair lima beans
17 packages Uncle Sam
17 packages Mueller's noodles
17 packages Felm's lard (1 pound).
12 cans Paradise pine apple
18 cans strawberries (2 quarts)
26 cans Booth spinach.
17 cans Hillsdale pineapple
11 cans Magnolia beets.
7 bottles My Wife's Salad Dr ss
37 cans Honey Drop corn.
6 cans Honey Drop succotash
11 cans Heinz' beans (medium)
9 cans Heinz' beans (small)
9 cans Libby corned beef (1 pound)
9 cans F Ami spaghetti
14 cans cherries.
7 cans Nessin's oil.
14 bottles L. S. pickles
73 bottles Wilde's pickles.
5 bottles Beardstey herring
. cans Pickert's herring
36 cans Rob Roy tomatoe.
57 cans Carolli tomatoes
47 cans Queen Quality peas
37 cans Ben Favorite peas
29 cans LeRoy peas
198 cans Libby salmon
14 cans Heinz' beans
27 cans Tuna fish (1 pound)
12 cans Tuna fish ($\frac{1}{2}$ pound)
48 cans McGowan's salmon (1 pound).
18 cans McGowan's salmon ($\frac{1}{2}$ pound)
18 cans Jap crab meat
31 cans shrimp
51 cans Campbell's soup
6 cans Campbell's beans
1 can Instant Postum (10 pounds)

7 cans R. Unchita oil
6 cans Snider's Chili sauce,
7 cans Park's syrup
14 packages Wheaterina
16 packages Beardsley cod
39? packages Gorton cod fish
18 packages Dromedary dates.
18 packages None Such mince meat
18 packages Magic Yeast
15 packages Malt breakfast food
16 packages Hecker's superlative flour
9 bottles Clarmount smoked beef
11 cans clam chowder

CONDAMNED BY THE MEAT INSPECTOR

The following food-stuffs were condemned during the year

2 calves.
560 pounds meat
6 ¹/2 buckets of lamb
36 turkeys
,² ducks
10 chickens
426 pounds poultry
6 barrels rabbits
81 crates cantaloupes
13 barrels and 15 crates green peppers.
9 crates of strawberries

APPENDIX III.

MISCELLANEOUS DATA.

United States census population of 1910.....	347,469
Estimated population, 1915.....	375,000
Total area of the city's square miles.....	23.40
Built up, square miles	17
Meadow land, square miles	6.25
Length of river and bay front, miles	11.5
Number of miles of granite block.....	102.48
Number of miles of asphalt block	2.18
Number of miles of Telford pavement	25.18
Number of miles of cobble stone pavement	1.31
Number of miles of asphalt pavement	52.83
Number of miles of brick pavement	51.57
Number of miles of bitulithic pavement	35.51
Number of miles of wood block pavement	3.28
Number of miles of bituminous concrete .....	.89
Number of miles of bituminous macadam .....	.12
Number of miles of Medina sandstone pavement .....	.17
Number of miles of Warrenite pavement .....	.10
Total length of paved streets, miles	255.62
Number of miles of unpaved streets.....	59.08
Length of electric railways, miles, Essex Division...	193,500
Length of steam railways, miles	25½
Length of brick and concrete sewers, miles	85.27
Length of pipe sewers, miles	305.34
Length of private sewers, miles	42.52
Total length of sewers, miles	433.13
Total number of sewer basins	4,087
Length of water mains, miles	542
Average daily consumption of water, gallons	42,400,000
Capacity of water supplied per day, gallons	50,000,000
Number of buildings in Newark	60,978
Shade trees planted since 1904	30,233

PUBLIC PARKS.

Military, acres	6.45
Washington, acres	3.40
Lincoln, acres	4.37
Other small parks, acres	5.67
Branch Brook, acres	280.62
Eastside, acres	12.69
Westside, acres	23.04
Riverbank, acres	5.75
Weequahic, acres	315.08

